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ABSTRACT

A summary is provided of the 1985-86 goals and accomplishments of Maricopa County Community College District's (MCCCD's) Student Assessment Pilot Project, which was conducted to develop a districtwide database of quantitative and qualitative information upon which decisions about policies, programs, and procedures related to assessment, advisement, and placement could be based. Following a brief introductory statement about the goals of the project, section 1 describes project activities related to policy development, offering background on the recommendations of the Commission on Student Assessment and Initial Course Placement; a summary of the results of a faculty survey about mandatory assessment and placement, including pro and con comments about mandatory assessment, mandatory placement, and developing a districtwide policy; and recommendations for policy formation. Section 2 looks at project activities concerned with procedure selection, including the pilot testing of two placement tests; i.e., the American College Testing Program's Assessment of Student Skills for Entry and Transfer (ASSET) and the College Board's Multiple Assessment Programs and Services (MAPS). This section includes information on the objective and subjective criteria and methods used to evaluate the ASSET and MAPS tests and research services. The bulk of the report consists of appendices which provide: (1) a policy draft and analysis; (2) local normative data about ASSET and MAPS placement test results; (3) a summary of the reliability and validity of the ASSET and MAPS tests; (4) a budget breakdown; (5) an analysis of a MCCCD student survey; (6) a computer programmer's evaluation of ASSET and MAPS; and (7) recommendations comparing ASSET and MAPS. (RO)

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STUDENT ASSESSMENT PILOT PROJECT

Maricopa County Community College District
JCEP Project # JZ-309
1985-86

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May, 1986

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TABLE OF CONTENTS

0.0 INTRODUCTION 3

1.0 PROJECT ACTIVITIES WITH RESPECT TO POLICY DEVELOPMENT 3
- **1.1 Background** 3
- **1.2 1985-86 Project Activities** 4
- **1.3 Recommendations for 1986-87 Policy Development** 8

2.0 PROJECT ACTIVITIES WITH RESPECT TO PROCEDURE SELECTION 9
- **2.1 Background** 9
- **2.2 1985-86 Project Activities** 11
- **2.2.1 Notes on the Pilot Testing of ASSET and MAPS** 11
- **2.2.2 Data Collection and Analysis** 12
- **2.2.2.1 Objective Criteria--Data for Evaluation** 13
- **2.2.2.2 Subjective Criteria--Data for Evaluation** 14
- **2.2.3 Evaluation of ASSET and MAPS** 18
- **2.3 Recommendations for 1986-87 Procedure Selection** 19

APPENDIX A--POLICY DRAFT AND ANALYSIS 20
APPENDIX B--LOCAL NORMATIVE DATA 29
APPENDIX C--SELECT TECHNICAL PROPERTIES OF THE ACT/ASSET AND COLLEGE BOARD/MAPS: A SUMMARY OF RELIABILITY AND VALIDITY 49
APPENDIX D--BUDGET BREAKDOWN (DRAFT) 62
APPENDIX E--PROJECT COORDINATOR EVALUATIONS 67
APPENDIX F--STUDENT SURVEY ANALYSIS 77
APPENDIX G--COMPUTER PROGRAMMER EVALUATION 83
APPENDIX H--ASSET V. MAPS RECOMMENDATIONS 85

0.0 INTRODUCTION

This report summarizes the goals and accomplishments of the Student Assessment Pilot Project for the 1985-86 school year. The major goal of this project was **"To develop a district-wide data base upon which decisions about assessment, advisement and placement may be based."** The data base was conceived as having two components: 1) Quantitative and qualitative data relevant to the proposed adoption of a district-wide assessment/advisement/placement policy and program; and 2) Quantitative and qualitative data relevant to the selection of an assessment/advisement/placement procedure.

1.0 PROJECT ACTIVITIES WITH RESPECT TO POLICY DEVELOPMENT

1.1 Background

During the 1983-84 school year, a Commission on Student Assessment and Initial Course Placement was formed by the Vice Chancellor for Educational Development. The Commission reviewed the current status of assessment of students for initial course placement within the District as well as for other flagship community college districts. In May of 1984, the Commission made the following recommendations to the Vice Chancellor for Educational Development:

1. MCCCD shall institute a district-wide program for student assessment for initial course placement.

2. **Assessment shall be mandatory** for: (1) all first time students enrolling for seven or more credit hours, (2) any student enrolling for the first time in an English, reading or math class, (3) any continuing or former student who has accumulated 6 credit hours and who falls below a 2.0 grade point average. Students who have earned an Associates degree or higher shall be exempt.

   Assuming that the report of the Subcommittee on degree requirements is accepted, all students should be assessed before the completion of 16 credit hours.

3. All MCCCD colleges shall use the same assessment instrument(s) and these instrument(s) shall be selected by the English, reading and math instructional councils.

4. Scores for placement shall be established by these instructional councils and used district-wide. Score ranges shall include a decision zone for students whose scores are borderline between course placements. Initial placement in English, reading and math courses shall be based on these scores **and shall be mandatory.**

5. A second level of assessment shall occur during the first week of classes of each semester. Instructors will collect additional information and review the initial placement with the student. At that time, the instructor may recommend a change in course placement. If, after consultation, the student does not agree with the instructor's recommendation, the student must sign a waiver indicating she/he does not intend to follow that recommendation.

6. Students should be encouraged to participate in an assessment/ advisement/ orientation process prior to the registration period. **However, students for whom assessment in mandatory must be assessed prior to enrollment.**

7. Research shall be implemented to support and evaluate the assessment and placement program.

1.2 1985-86 Project Activities

During the current project year, initial interviewing by the district coordinator with campus project coordinators, Deans of Instruction and members of the original Commission indicated that a number of the recommendations of the Commission were controversial. Some comments went so far as to indicate that if recommendations were mandated **without further input** from campus personnel, **they would not be implemented**. It was reasoned that a policy without the endorsement of the persons assigned to implement it would be of little value. Therefore, efforts have been directed to determine issues and concerns relating to a proposed District policy on assessment.

In the Fall of 1985, a survey was distributed to all full-time faculty, and part-time faculty certified in the areas of English, reading and math. The survey sought faculty input regarding the issues of mandatory assessment, mandatory placement and a proposed District-wide policy. A summary of faculty responses follows.

Fall '85 Faculty Survey SUMMARY

****

(Note: 47% of all full time faculty responded to the survey, and 25% of part-time faculty with certification in English, reading and math, for a total response rate of 46%)

****

		IN FAVOR OF:	
MANDATORY ASSESSMENT?		MANDATORY PLACEMENT?	DISTRICT POLICY?
YES:	55.6%	35.9%	48.0%
NO:	5.0%	14.2%	9.5%
NEED MORE INFORMATION:	27.8%	35.9%	30.9%
NO RESPONSE:	11.6%	14.0%	11.6%

COMMENTS

MANDATORY ASSESSMENT

PRO

• LONG OVERDUE--LET'S HELP STUDENTS BEGIN THEIR EDUCATIONAL EXPERIENCE AT A POINT WHERE THEY HAVE AN OPPORTUNITY TO SUCCEED. • MANDATORY ASSESSMENT IS AN EXCELLENT IDEA. • I FEEL VERY STRONGLY ON THIS ISSUE. AFTER 18 YEARS OF FULL TIME MATH TEACHING AT THE UNIVERSITY AND COLLEGE LEVEL, I FEEL CONVINCED THAT MANDATORY ASSESSMENT IS THE ANSWER. • SOMETHING MUST BE DONE--NOW! WHERE ARE OUR STANDARDS FOR COLLEGE STUDENTS? • DO IT! • IN MY OPINION, THIS COULD BE THE MOST SIGNIFICANT STEP TOWARDS "EXCELLENCE" IN THE CLASSROOM. • DO IT AND QUIT WASTING TIME PHILOSOPHIZING OVER "FAIRNESS" AND "DISCRIMINATION." TESTING AND PLACEMENT ARE NOT DISCRIMINATORY. IT IS IMMORAL AND UNETHICAL TO PLACE OR LET UNPREPARED STUDENTS REGISTER FOR CLASSES AND THEN FAIL THEM. • I BELIEVE MANDATORY ASSESSMENT WOULD RESULT IN INCREASED RETENTION.

CON

• STUDENTS SHOULD FEEL FREE TO CHOOSE AND NOT BE COERCED OR FORCED INTO MANDATORY TESTING ESPECIALLY ADULTS AND IN EVENING COURSES. • TESTING HELPS TO PLACE BUT NOT AT THE COST OF LOSING STUDENTS WHO THINK THEY ARE NOT BRIGHT ENOUGH TO CONTINUE THEIR EDUCATION. • MANDATORY ASSESSMENT...QUICKLY BECOMES: ANOTHER LAYER OF BUREAUCRACY TO DEAL WITH AND SUPPORT; INEFFECTIVE; MORE PENALIZING THAN USEFUL.

MANDATORY PLACEMENT

PRO

MOST FACULTY WHO SUPPORTED MANDATORY ASSESSMENT ALSO SUPPORTED MANDATORY PLACEMENT. HOWEVER, MANY EXPRESSED QUALIFICATIONS AS: • MUST BE ENFORCED TO BE EFFECTIVE • IF MUTUALLY AGREED UPON BY STUDENT/ADVISOR/INSTRUCTOR • WITH APPEAL

CON

• MANDATORY PLACEMENT IS JUST AN EASY COP-OUT FOR NOT GIVING AN ADEQUATE EXPLANATION. STUDENTS WILL ACCEPT SUGGESTED PLACEMENT WITH A LOT LESS ANIMOSITY IF IT IS EXPLAINED TO THEM.

DISTRICT POLICY

PRO

• UNLESS THE DISTRICT POLICY IS SO ACCOMMODATING TO EVERY OBJECTION THAT IT BECOMES INEFFECTIVE, I BELIEVE THAT SUCH DISTRICT-WIDE POLICY WOULD SUPPORT THE RHETORIC OF QUALITY EDUCATION IN MCCCD COLLEGES. • I FEEL THE DISTRICT ADMINISTRATION NEEDS TO TAKE A FIRM STAND IN FAVOR OF MANDATORY ASSESSMENT AND PLACEMENT SO THAT AS A DISTRICT WE PROMOTE STUDENT SUCCESS. • I'VE TAUGHT ON ALL CAMPUSES EXCEPT SOUTH MOUNTAIN AND MARICOPA TECH AND WOULD REALLY WELCOME A DISTRICT-WIDE APPROACH.

CON

• EACH CAMPUS SHOULD BE ABLE TO USE WHAT THEY BELIEVE WORKS BEST FOR THEM IF AT ALL POSSIBLE. • DISTRICT-WIDE POLICY RARELY MEETS THE NEEDS OF AN INDIVIDUAL CAMPUS AND TENDS TO LESSEN THE QUALITY OF THE DELIVERY OF SERVICES TO OUR STUDENTS--DECENTRALIZE! LET THE CAMPUS DEVELOP FOR THE NEEDS OF THEIR STUDENTS AND THE EXPERTISE OF FACULTY.

****

Follow-up to the faculty survey has been two-fold. First, efforts have been made

at the campus and District level to publicize results of the pilot study in response to the faculty's need for more information. Second, a draft assessment policy was written (Appendix A) by the district coordinator and distributed to Presidents, Deans of Instruction and campus project coordinators for dissemination on their respective campuses.

The policy was based on recommendations from the original Commission report. Modifications were added in response to criticisms of the original recommendations elicited through initial interviewing throughout the District (e.g., failure to address phone-in registration; failure to account adequately for "special needs" students). In general, the policy statement sought to be broad enough to apply equally to all campuses while flexible in its wording to allow campus variation in implementation.

Briefly, the policy attempted to address seven issues/concerns :

1) the philosophy and definition of assessment;
2) the purpose of assessment;
3) the specification of exemptions from mandatory testing (i.e., as applies to screening);
4) the specification of to whom and how mandatory placement testing applies;
5) the establishment of general guidelines for phone-in registration (i.e., exceptions to "normal" procedures);
6) the establishment of general guidelines for mandatory course placement and advisement; and,
7) the specification of follow-up evaluation to allow for changes in intial course placement .

Campus personnel were asked to react to the statement in writing, and return comments to the campus and/or district coordinator. No responses were received by Glendale Community College, Maricopa Tech or Northeast Valley Education Center. Mesa Community College submitted 4 responses; Phoenix College-14; Rio Salado-2; Scottsdale-4; and South Mountain Community College-1. An analysis of comments

from the 25 respondents follows, focusing only on points of contention (see Appendix A for record of comments).

A majority of comments focused on policy implementation. Implementation concerns--the whos, hows, whats and whens of the policy--were noted for every section of the policy draft. Relatively few comments took issue with the policy itself, implying an acceptance of a District policy as well as mandatory assessment and placement. The most apparent problems with the policy statement concern:

--specific criteria used to exempt students from testing (e.g., an Associates degree or higher; 6 or more accumulated credit hours with a GPA of at least 2.0);
--the handling of phone-in registration;
--the fact that not all MCCCD colleges offer all basic skill courses; and,
--options for follow-up evaluation.

Several people noted specific sections of the policy which were "confusing" to read. One person took exception to the "right to succeed" philosophy in noting students' "right to fail."

1.3 Recommendations for 1986-87 Policy Development

It is my perception as district coordinator for the Pilot Student Assessment Project that the 1985-86 year has brought about a basic acceptance of the premise of mandatory assessment and the advantages of a District policy on assessment. A forthcoming District policy is expected.

The major concerns elicited from faculty responses to the policy relate to implementation. One possible course of action for the 1986-87 year is to capitalize on implementation concerns to direct further policy development.

One suggestion is to form implementation teams on each campus. Teams could

be comprised of at least one member from each group which would be charged with policy implementation, e.g., A & R personnel, counselors, test administrators, academic advisors, math, English and reading staff. A campus chairperson could be designated to represent the team at District-wide meetings.

Implementation team chairs from each campus would be responsible for resolving policy issues at the District-level, while assuring that campus autonomy in implementation is protected. Implementation team chairs would report to their campus Dean of Instruction, as Dean involvement in policy issues is critical to any implementation plan (particularly as implementation interfaces with the budget).

Outstanding policy issues which need resolution center on those points of contention outlined earlier in this report, e.g., exemption criteria; phone-in registration. In addition, policy wording needs to be refined and conceptual clarification reached. Specifically, assessment as a process v. assessment as a test needs to be discussed. However defined, the District's use of the word "assessment" needs to be clarified, agreed upon and **publicized.**

Implementation teams, at both the individual campus and District level, should develop a set of recommendations for policy implementation. These might address options for implementation, as a phase-in approach to accomodate budgetary constraints versus total implementation. Proposals for institutional use of assessment data and program evaluation might be considered as well and so forth.

The coordination of efforts to resolve policy issues at the District level may require intervention of District office staff. Options for District office involvement need to be considered.

2.0 PROJECT ACTIVITIES WITH RESPECT TO PROCEDURE SELECTION

2.1 Background

During the 1984-85 school year, plans were developed to pilot test two

placement tests: the American College Testing company's ASSET (Assessment of Student Skills for Entry and Transfer) and the College Board's MAPS (Multiple Assessment Programs and Services). A study was designed, in consultation with representatives from both companies, whereby each of the seven college campuses and Northeast Valley Education Center planned to test 500 incoming students per test per semester during the 1985-86 school year. The pilot project was intended to produce local normative data and predictive validity data for evaluative use in selecting a preferred instrument to be adopted District-wide.

The rationale for a single instrument to be used throughout the District evolved from the Commission on Student Assessment and Initial Course Placement report to the Vice Chancellor for Educational Development. The Commission had recommended uniformity in procedure to assure the equality of placement throughout the District. In particular, MCCCD legal counsel emphasized that criteria for placement be consistent across the District and it was felt that adoption of one test was most efficient for assuring such consistency. A common instrument was perceived as having a number of advantages in relation to the common curriculum and in relation to transfer opportunities for MCCCD students within the District and with other institutions.

During 1984-85, the pilot project was conceived to result in a recommendation for either ASSET or MAPS* by the end of June, 1985 for implementation in the Fall of 1986-87. Following the original Commission report, English, Reading and Math Instructional Councils were to evaluate pilot project materials in order to make the recommendation.

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* The original intent of the project was to evaluate ASSET and MAPS in relation to placement tests currently used on each campus (e.g., Phoenix College's TICCIT). However, no plans were made to systematically collect or analyze campus placement test data so as to create a comparable data base for evaluative purposes. In effect, the maintenance of campus placement tests as an option within the District became obsolete during the pilot project due to the lack of evaluative data.

2.2 1985-86 Project Activities

2.2.1 Notes on the Pilot Testing of ASSET and MAPS

My involvement as district coordinator of the Student Assessment Pilot Project began in September of 1985, at which point all campuses and NVEC were well into using ASSET and MAPS for placement. Initial interviewing with campus project coordinators indicated concern for discrepancies between campuses in terms of implementing the project following the research design. In fact, variations from "true" random sampling, differences in procedures used in testing (e.g., pre-enrollment test sessions versus post-enrollment in-class testing), differences in test administrator training, and a number of similar factors prohibit viewing the research as a true experimental study. I suggest, however, that the study maintains its credibility in having produced a data base within natural constraints which may be anticipated to occur in the future use of the instruments.

I note problems encountered in adhering to the research design only insofar as these problems may affect the interpretation and use of the data. For example, the suggested sample size of 500 students per test per semester failed to consider the enrollment patterns of the various campuses. While 500 students per test (1000 students) at Mesa represent a sample of Mesa's new student population, 115 students per test (230 students) at South Mountain represent virtually all of SMCC's new student population. South Mountain campus data is more completely representative of its campus than other campus data bases, yet represents a small proportion of the District normative data base.

The District norms developed within the pilot are definitely biased in favor of larger campus sample populations. This may mean that local normative data does not reflect student variation in test performance to the same extent as could be expected by testing all eligible students.

Given the limitations of the research, the goal of the project was nevertheless to

produce a recommendation for either ASSET or MAPS. It soon became apparent that statistical test data for the 1985-86 Spring semester would not be available from either test company until July or August of 1986--past the project's scheduled completion date of June 30, 1986. It was decided to postpone a final recommendation until the Fall of 1986-87 in order to make a decision based upon a complete data base. Therefore, the project's goal was modified to produce a preliminary recommendation regarding ASSET versus MAPS no later than June 30, 1986.

2.2.2 Data Collection and Analysis

Data collection and analysis focused on deriving information necessary for evaluating ASSET and MAPS. Objective and subjective evaluation criteria were identified, in consultation with campus project coordinators, Deans of Instruction and English, Reading and Math Instructional Councils. Objective criteria for evaluation included each test's administrative and technical properties as well as each test's cost. Quantitative data was sought for objective evaluation. Subjective criteria included satisfaction with the tests, test results and test company services. Qualitative data was sought for subjective evaluation.

The evaluation criteria and materials identified through the project are presented below for review.

PROPOSED CRITERIA FOR EVALUATING ACT'S ASSET v. COLLEGE BOARD'S MAPS TESTS/RESEARCH SERVICES

CRITERIA	EVALUATION MATERIALS
I. **OBJECTIVE** CRITERIA	
A. **Test Properties**	
1. Specifications for administration	Test company manuals
2. Scoring & procedures	Test company manuals
3. Normative data	Test company reports (national/local data)
4. Statistical properties	
a. Reliability	Test company reports (national data only)
b. Validity	
i. Content validity	Item specifications
ii. Predictive validity	Test company reports (national/local data)
B. **Cost-Effectiveness**	Locally-derived budget analyses
II. **SUBJECTIVE** CRITERIA	
A. Satisfaction with tests (e.g., test properties; implementation)	Testing personnel reports Student survey results
B. Satisfaction with test results (e.g., utility of test scores for advisement; placement outcomes)	Faculty survey results Student survey results Local predictive validity studies
C. Satisfaction with test companies (e.g., support services; practical utility of research reports)	Informal/documented opinions Complete data base

2.2.2.1 Objective Criteria--Data for Evaluation

A number of statistical reports were generated by the project. Only those used

for evaluating ASSET and MAPS are presented in this report. Local normative data are presented in Appendix B for review. The statistical properties of each test are presented in Appendix C. The statistical properties were presented to evaluators in the form of a "mini-manual" which summarized requested evaluative data (i.e., from the four test manuals utilized in the project). Budget information is available in Appendix D.

2.2.2.2 Subjective Criteria--Data for Evaluation

Satisfaction with Tests

Two sources of information were developed to judge satisfaction with the tests themselves. Campus project coordinators were asked to survey test administrators on their respective campuses and prepare an evaluation report. This report also addressed the satisfaction with test results and satisfaction with test companies. Reports were summarized and compiled by the district coordinator. This summary report is presented in its entirety in Appendix E. In short, project coordinators and test administrators preferred ASSET.

A second source of information to determine test satisfaction was a student survey. ASSET and MAPS student participants were independently polled each semester, approximately 10 weeks after testing. The survey was sent at this time so that students could report perceptions of their test experience as well as reflect on the adequacy of their placement. Student survey results were evaluated qualitatively and quantitatively.

For the Fall semester (n = 218 total respondents), student comments were recorded and analyzed. Negative comments appeared equally directed at both ASSET and MAPS math tests. No negative comments were recorded for ASSET's English and reading tests, but were recorded for both areas of MAPS. Most comments linked dissatisfaction with tests to perceived misplacement. For the Spring semester (n =

104 total respondents) , so few students responded in the section allowing for their comments that comments were not analyzed.

The quantitative analysis was directed at determining whether statistically significant differences existed between ASSET and MAPS respondents in their perceptions of various aspects of testing, including understanding the reasons for taking the tests, the length of time involved, the clarity of test directions and examples, the reading, English and math tests as both "fair" (e.g., no "trick" questions) and "good" tests of ability (e.g., including a range of easy to difficult items) and the time limits for each test. Students responded to questions with positive, neutral or negative responses. The relative proportions of students responding positively, neutrally and negatively per question were analyzed for both ASSET and MAPS participants and compared using a procedure similar to a t-test of means.

For the Fall pilot testing, ASSET was more positively perceived in 4 out of 11 areas (the clarity of test directions, the reading test as fair, the English test as fair and the math test as a good test of ability) and more negatively perceived in 2 areas (length of time involved and clarity of test examples). In no area was MAPS perceived more positively than ASSET. MAPS was perceived more neutrally with respect to the math test as fair and good, and more negatively perceived in 3 areas (the clarity of test directions, the English test as a good test of ability and the math test as a fair test of ability). Cumulatively, there were significantly more positive ASSET responses on the survey, and significantly more neutral and negative MAPS responses.

For the Spring semester, ASSET was more neutrally perceived in 3 areas (the English test as fair and good and the test time limits) and more negatively perceived with respect to the reading test as a good test of ability. MAPS was more positively perceived with respect to the clarity of test directions and the English test as fair. In no area was MAPS more neutrally or negatively perceived. Cumulatively, there were no significant differences between ASSET and MAPS participants in the relative

proportion of postive, neutral or negative responses.

Summing the responses from Fall and Spring (n = 322 total respondents), there were significantly more positive ASSET responses in 3 areas (the reading and math tests as fair, and the math test as a good test of ability) and more negative responses in the area of length of time involved for testing. In no area was MAPS more positively perceived. MAPS was more neutrally perceived with respect to the length of time involved for testing and the math test as both fair and good. MAPS was more negatively perceived with respect to the reading test as both fair and good. Cumulatively, no significant differences were recorded in neutral and negative responses between ASSET and MAPS for the 1985-86 year, while significantly more positive responses were recorded for the ASSET group than for the MAPS group. (See Appendix F for a summary of the analyses.) Overall on the basis of the 1985-86 survey respondents, ASSET appears to be the test preferred by students.

Satisfaction with Test Results

Initially both faculty and student satisfaction with test results was sought through faculty and student surveys. Faculty members teaching developmental courses, upper level courses and both kinds of courses were polled. Faculty members teaching developmental courses were asked if students appeared to have been properly placed and if they felt placement was better than in the past, worse or no different. Upper level course instructors were asked if they were satisfied that their students had prerequisite basic skills.

To summarize the results of the survey, the majority (63.7%) of the faculty teaching developmental courses felt students had been placed properly. Most (52.7%) felt that there was no difference in placement in comparison with the past, while 20.9% felt placement was better and 13.2% felt placement was worse. (The remaining 13.2% did not respond to the question.) Of the upper level faculty members, 71.5% felt

students did not have prerequisite basic skills as opposed to 28.5% who felt students did have basic skill prerequisites.

As faculty members were uninformed as to which students were placed with ASSET and MAPS, they could not attest to the adequacy of one instrument versus the other for placement. Eventually, then, results of the faculty survey were not used in making a preliminary recommendation.

In order to determine student satisfaction with test results, students were asked to comment on their course placement made as a result of their test scores. Students were asked to indicate what course was recommended and whether or not they enrolled for the course. If they had enrolled, they were to indicate whether or not they were satisfied with the course, or whether they had transferred to another course or dropped the course completely. Proportions of ASSET and MAPS respondents were compared to determine whether or not significant differences existed between the two groups of students. No significant differences were found on any variable. Relatively equal percentages of students for both instruments reported enrolling for courses, transferring, dropping, etc. On the whole, both groups of students reported being satisfied with their recommended course, regardless of whether or not it was a developmental course.

With no apparent subjective differences between ASSET and MAPS in terms of satisfaction with test results, evaluation relied more heavily on the results of the predictive validity studies reported in Appendix A.

Satisfaction with Test Companies

Test companies were evaluated by campus project coordinators, whose reports are summarized in Appendix E. Additionally, the District data processing project coordinator was asked to prepare a brief evaluation statement. This was done as much of the project's implementation relied upon the computer exchange of

information between the Maricopa Colleges and ACT and College Board. Differences in customer service and ease of preparation of materials were felt to be important criteria (particularly if colleges are charged eventually with submitting data on a campus-by-campus basis rather than as a District). The data processing report is attached in Appendix G for review.

2.2.3 Evaluation of ASSET and MAPS

As noted earlier in this report, the Commission on Student Assessment and Initial Course Placement recommended that English, Reading and Math Instructional Councils be responsible for selecting an instrument. Early interviewing revealed some tension regarding this recommendation. Briefly, some interviewees felt that because instructional council members were not directly involved in implementing the tests, they were not fully aware of some factors felt critical to the decision-making process. Additionally, as the selection of an instrument interfaced with budgetary concerns, Deans of Instruction expressed a desire to be involved in the decision-making process.

Eventually, input on the selection of an instrument was sought from Deans of Instruction, campus project coordinators and test administrators and English, Reading and Math Instructional Councils. These groups were kept apprised of the project, and were consulted in deriving data necessary for evaluation. Each group eventually met to review and discuss evaluation materials.

Campus project coordinators' evaluations have already been cited and are available in Appendix E. Deans of Instruction voted unanimously for ASSET (see Appendix H). English and Reading Instructional Councils also voted unanimously for ASSET (see Appendix H). The Math Instructional Council expressed neutrality, indicating that they would abide by any District selection as long as they were free to define a process for math placement testing (see Appendix H). Based on the evaluation of materials from all groups, a preliminary recommendation is submitted in

favor of ACT's ASSET test and services.

2.3 Recommendations for 1986-87 Procedure Selection

In order to make a final recommendation regarding ASSET and MAPS, data for evaluation for the 1985-86 Spring semester need to be generated, compiled and distributed following the procedures enacted during the 1985-86 project year. Primarily this entails the preparation of computer tapes by the MCCCD computer services division. Evaluation data yet to be generated encompass local normative data and local predictive validity data. (The generation of the data by the MCCCD computer service division may be accomplished before the end of the project year, but our experience from last semester indicates that July, 1986 is a more realistic projection.)

Data returned from the test companies in July/August must be sorted and analyzed prior to distribution. Data is received for each campus and the District as a whole. During the 1985-86 project year, each campus received its own data and District data. These data then need to be distributed and discussed with appropriate interest groups, e.g., Deans of Instruction and English, Reading and Math Instructional Councils.

The coordination of efforts to select a procedure will require a contact person at the District level. This person is required primarily as a liason for test companies, and to analyze and distribute data once returned to the District. Options for District office involvement need to be considered.

APPENDIX A

MCCCD ASSESSMENT POLICY –DRAFT #1

In its commitment to provide students a "right to succeed" academically, the Maricopa Community Colleges require all students to be assessed. **Assessment** is herein defined as a process by which student skills and knowledge are identified and evaluated. The assessment process may include any or all of the following:

- evaluation of previous experience and past academic performance;
- placement testing in English, reading and/or mathematics;
- in-class observation and criterion-referenced evaluation;
- interviews and/or other sources of student information.

The primary purpose of assessment is to place students in courses best predictive of academic success... Moreover, the assessment process is designed to promote equality of educational opportunity among the Maricopa Community Colleges and to facilitate transfer opportunities between MCCCD colleges as well as other institutions. The Maricopa Community Colleges acknowledge their responsibility to provide an on-going evaluation of their assessment process, in order to assure the goals of assessment are being met to the best interests of their students.

Typically assessment will begin with initial student **screening** to determine if a student shall be exempt from placement testing. A student shall be exempt if one or more of the following conditions apply:

- the student has earned an Associates degree or higher;
- the student is a continuing or former student who has accumulated 6 or more credit hours and has maintained a grade point average of at least 2.0;
- the student is a former student or MCCCD transfer student who has placement test scores on file, current to within one year of re-entry or transfer;
- the student is a transfer student who has previously demonstrated skill competency (i.e., earned course credits accepted by the MCCCD in fulfillment of basic skill requirements in English, reading and/or mathematics);
- the student exhibits special needs *, as for example:
  - the student has a physical and/or learning disability which either impairs his/her ability to perform on a standardized achievement test or prevents his/her access to testing facilities;

MCCCD ASSESSMENT POLICY --DRAFT #1--continued

- the student's first AND dominant language is other than English.

*NOTE: Special needs students *may* be exempt from typical placement testing procedures but *shall* be required to receive advisement and/or alternative placement tests at the discretion of the responsible Student Service agent/division.

Following initial screening, **placement testing** shall be mandatory as follows:

- ALL first time community college students enrolling for 7 or more credit hours shall take a placement battery consisting oEnglish, reading and mathematics tests;
- ANY student enrolling for the first time in an English, reading and/or math course must take the appropriate content area placement test(s);
- ANY student enrolling for the first time in any course with an English, reading or math prerequisite, AND who cannot exhibit evidence that the prerequisite has been met, must take the appropriate content area placement test(s);
- ANY continuing or former student who has accumulated 6 or more credit hours and who falls below a 2.0 grade point average shall take one or more content area placement tests as appropriate;
- ANY transfer student unable to provide evidence of skill competency (i.e., earned course credits accepted by the MCCCD in fulfillment of basic skill requirements in English, reading and/or mathematics) shall take one or more content area placement tests as appropriate.

It shall be the policy of the Maricopa Community Colleges that students for whom placement testing is mandatory must provide evidence of having taken the required test(s) prior to registration, with the following exception.

Students for whom placement testing is mandatory who are registering by telephone may be permitted to enroll on a provisional basis. The student must make arrangements during the first week of classes to take the appropriate placement test(s). The results of the placement test(s) must be discussed with a counselor or academic advisor (including a specific course instructor). The counselor/advisor reserves the right to change a student's placement in accordance with the policies outlined below. **Any student who fails to meet his/her responsibility to take placement tests may be dropped unconditionally from a course.**

MCCCD ASSESSMENT POLICY --DRAFT #1--continued

A student receiving a test score indicative of placement in a specific course must either enroll for AND successfully complete the course indicated* *or* re-test at a higher level, prior to enrolling in a higher level course within the same department *or* a course with a higher level course prerequisite in another department. It shall also be the policy that a student receiving a test score within a designated "decision zone" must receive predictive counseling to aid the student in selecting a course(s) best predictive of student success.

*NOTE: Not all Maricopa Community Colleges offer all basic skill courses every semester. If a mandated course is not offered, the student *may* be permitted to enroll in the next course within a sequence provided the student has received predictive counseling.

Follow-up evaluation may occur during and after a student's first week of enrollment in class. At this time, two procedures allow for modification of a student's initial course placement.

1.) An instructor may **CHALLENGE** a student's initial course placement on the basis of additional information, including observation and/or criterion-referenced evaluation of the student's work. The instructor may recommend a change in course placement. After consultation with the instructor, the student must sign a release/waiver to indicate whether he/she does or does not intend to follow the instructor's recommendation.

2.) Students may also reserve the right to **APPEAL** a placement decision. If, AFTER the first week of class, a student feels he/she has been misplaced, he/she may request a re-take of the placement test (i.e., alternative-form placement test *or* equivalent measure of student ability). One re-take per course per semester shall be permitted. The results of the re-take must be discussed with the instructor and/or department chairperson. The instructor and/or department chairperson shall reserve the right to uphold or deny the student's appeal.

ANALYSIS OF POLICY STATEMENT WITH FACULTY COMMENTS

To facilitate the analysis of policy comments, the policy was broken into subsections and titled. Each subsection with faculty comments is presented below for review.

STATEMENT OF PHILOSOPHY AND DEFINITION OF ASSESSMENT

"In its commitment to provide students a "right to succeed" academically, the Maricopa Community Colleges require all students to be assessed. **Assessment** is herein defined as a process by which student skills and knowledge are identified and evaluated. The assessment process may include any or all of the following:
- evaluation of previous experience and past academic performance;
- placement testing in English, reading and/or mathematics;
- in-class observation and criterion-referenced evaluation;
- interviews and/or other sources of student information."

Comments
- Students have a right to fail - Statement is vague - Placement testing should be in all three areas - Who will assess previous experience? Past academic performance? Conduct interviews? How? - What is meant by criterion-referenced evaluation?

PURPOSE OF ASSESSMENT

"The primary purpose of assessment is to place students in courses best predictive of academic success. Moreover, the assessment process is designed to promote equality of educational opportunity among the Maricopa Community Colleges and to facilitate transfer opportunities between MCCCD colleges as well as other institutions. The Maricopa Community Colleges acknowledge their responsibility to provide an on-going evaluation of their assessment process, in order to assure the goals of assessment are being met to the best interest of their students."

Comments
- Statement contradicts definition - Statement is terrible--the purpose of assessment is to help students - What is meant by courses best predictive of academic success? - Will student tracking system be necessary to accomplish this? How will counselors have access?

SCREENING FOR EXEMPTION

"Typically assessment will begin with initial student **screening** to determine if a student shall be exempt from placement testing. A student shall be exempt if one or more of the following conditions apply:

1 the student has earned an Associates degree or higher;
2 the student is a continuing or former student who has accumulated 6 or more credit hours and has maintained a grade point average of at least 2.0;

POLICY ANALYSIS--continued

3 the student is a former student or MCCCD transfer student who has placement test scores on file, current to within one year of re-entry or transfer;
4 the student is a transfer student who has previously demonstrated skill competency (i.e., earned course credits accepted by the MCCCD in fulfillment of basic skill requirements in English, reading and/or mathematics);
5 the student exhibits special needs *, as for example:
- the student has a physical and/or learning disability which either impairs his/her ability to perform on a standardizedachievement test or prevents his/her access to testing facilities;
- the student's first AND dominant language is other than English.

*NOTE: Special needs students *may* be exempt from typical placement testing procedures but *shall* be required to receive advisement and/or alternative placement tests at the discretion of the responsible Student Service agent/division.

Comments

• Who is to conduct screening? With what? How? • How are these students to be identified? **Exemption 1** • This should not exempt from math or English placement • This doesn't assure proficiency in the assessment areas • So if he has had no math, he doesn't need math placement?! He needs math placement testing even if he has a Ph.D. in German or history or some field unrelated to math. • We're making a wrong assumption here. **Exemption 2** • Specify 6 or more hours in English and mathematics • This exempts a non-reader into philosophy, psychology, history, etc. • Why should these students be exempt? • Not acceptable--conflict with first-time English enrollee? • Hard to ascertain • In conflict with the "right to succeed" philosophy espoused earlier in the policy. Does this right only pertain to students taking 7 hours or more? It seems to me that the criterion for exemption should be the nature of the courses taken rather than the number of hours of enrollment.... • This should depend on whether the credits accumulated are in courses requiring competency in English or reading or math.... • Course content and skill requirements are more important than number of credit hours accumulated--successful completion of courses requiring college level writing, reading and/or math skills. • Test everyone or none • Students may take non-academic courses...statement needs to be better qualified **Exemption 4** • Assumes all colleges are on a par **Exemption 5** • These students need to be assessed all the more--placement testing of foreign students (who speak English as a second language) is of extremely great importance • The student must not be exempt--simply given a different process • No ESL placement? • Test everyone--don't discriminate • You need an ESL statement • Will students be required

POLICY ANALYSIS--continued

to seek advisement if testing not taken?

MANDATORY PLACEMENT TESTING

Following initial screening, **placement testing** shall be mandatory as follows:

1 ALL first time community college students enrolling for 7 or more credit hours shall take a placement battery consisting oEnglish, reading and mathematics tests;
2 ANY student enrolling for the first time in an English, reading and/or math course must take the appropriate content area placement test(s);
3 ANY student enrolling for the first time in any course with an English, reading or math prerequisite, AND who cannot exhibit evidence that the prerequisite has been met, must take the appropriate content area placement test(s);
4 ANY continuing or former student who has accumulated 6 or more credit hours and who falls below a 2.0 grade point average shall take one or more content area placement tests as appropriate;
5 ANY transfer student unable to provide evidence of skill competency (i.e., earned course credits accepted by the MCCCD in fulfillment of basic skill requirements in English, reading and/or mathematics) shall take one or more content area placement tests as appropriate.

Comments

Category 1 • It's easy to bypass this--just register 2 different times • Same problem as with exemption--number of credits not a good criteria • Number of credits inappropriate--do everyone or none • Change 7 to 6 credit hours **Category 2** • This doesn't do it--enrollment in English should be required as continuous until the student passes **Category 3** • We must then establish these prerequisites **Category 4** • The 6 or more credit hours can be nonreading/nonacademic courses--need to be more explicit • Need a tracking system to implement this • What's appropriate? Who decides? • A 2.0 grade point average is a meaningless measure--need to look at what courses have been taken • Not GPA--ANY grade less than C **Category 5** • Transfer from where?--from MTCC? from MCC? from Harvard? • Who will make decision on acceptance of transfer?

POLICY ANALYSIS--continued

EXCEPTION TO MANDATORY PLACEMENT TESTING

"It shall be the policy of the Maricopa Community Colleges that students for whom placement testing is mandatory must provide evidence of having taken the required test(s) prior to registration, with the following exception.

Students for whom placement testing is mandatory who are registering by telephone may be permitted to enroll on a provisional basis. The student must make arrangements during the first week of classes to take the appropriate placement test(s). The results of the placement test(s) must be discussed with a counselor or academic advisor (including a specific course instructor). The counselor/advisor reserves the right to change a student's placement in accordance with the policies outlined below. **Any student who fails to meet his/her responsibility to take placement tests may be dropped unconditionally from a course."**

Comments

• Who is going to continuously follow-up on this? • Should not be permitted into class before testing--studies indicate this is the worst possible solution. This is reactive not proactive. It puts the burden on the classroom teacher. [Last sentence]--talk about public relations! • If we go heavily into telephone registration this would put a real strain on counselors at the busiest time of year. • In our long range planning we do need to include a formal, organized, advertised "telephone advising" program • Provisional enrollment only for math, English, reading or classes where these subjects are prerequisites; Arrangements should be made prior to being in class due to problems with drop-add procedures; In general, this policy segment sounds too harsh--change wording • Change "may be dropped" to "will be"--don't leave a loophole for discrimination and problems for teachers who have to make the decision. Make it a college dogma from the administration • When must the student make arrangements? How? Will they be flagged in the computer? • The first week of class is a little late if changes are to be made in a student's program. • How will a teacher know to drop a student? • I question enrolling prior to testing--we are creating our own problems. •May cause some difficulties with faculty who, up to now, expect students to have completed all appropriate placement testing prior to enrollment. Appreciating the rationale for students who do not follow through with testing after enrollment appears to detract from our "success strategies" and "retention efforts"...students have a way of manipulating the system, and in the way this section reads, too big a loophole has been created.

POLICY ANALYSIS--continued

MANDATORY PLACEMENT

"A student receiving a test score indicative of placement in a specific course must either enroll for AND successfully complete the course indicated* or re-test at a higher level prior to enrolling in a higher level course within the same department or a course with a higher level course prerequisite within another department. It shall also be the policy that a student receiving a test score within a designated "decision zone" must receive predictive counseling to aid the student in selecting a course(s) best predictive of student success.

*NOTE: Not all Maricopa Community Colleges offer all basic skill courses every semester. If a mandated course is not offered, the student may be permitted to enroll in the next course within a sequence provided the student has received predictive counseling."

Comments

• The policy as described should apply to courses for which English, reading or math skills are listed as prerequisites in the catalog. For other courses in which success is found to be dependent on English, reading or math skills (information to be obtained by tracking, I hope) predictive counseling should be used. • Will all colleges have a second test that will allow interchange between campuses? • I have some reservation about the "NOTE". • Confusing statement. • In reference to the "NOTE"--Same old revolving door: Get'em in and "F" 'em out. Ridiculous. If test is valid, don't let student in a course to fail it. • ..."may be permitted to enroll" with faculty approval • How do we control for enrollment, successful completion, retesting prior to enrolling in higher level courses? In reference to "NOTE"--that's crazy--let's stand for something educationally. • In reference to "NOTE"--Is this fair? What if skills aren't developed to succeed in this class?

FOLLOW-UP EVALUATION

"Follow-up evaluation may occur during and after a student's first week of enrollment in class. At this time, two procedures allow for modification of a student's initial course placement.

1) An instructor may CHALLENGE a student's initial course placement on the basis of additional information, including observation and/or criterion-referenced evaluation of the student's work. The instructor may recommend a change in course placement. After consultation with the instructor, the student must sign a release/waiver to

POLICY ANALYSIS--continued

indicate whether he/she does or does not intend to follow the instructor's recommendation.

2) Students also reserve the right to APPEAL a placement decision if, AFTER the first week of class, a student feels he/she has been misplaced. He/she may request a re-take of the placement test (i.e., alternative-form placement test or equivalent measure of student ability). One re-take per course per semester shall be permitted. The results of the re-take must be discussed with the instructor and/or department chairperson. The instructor and/or department chairperson shall reserve the right to uphold or deny the student's appeal."

Comments

Instructor Challenge • Need faculty training then. • If test is valid predictor--why bother? This should not occur. Retest! • How far into the semester can this be realistically done? • If our assessment proves faulty, can the $10.00 drop/add fee be waived? • What will be recommended for the student who cannot be moved into a level of the course after the drop/add period? Student Appeal • The first week often is not an indicator of what goes on in the class. • No assurance that we will have alternate form. • Many times students must carry a minimum number of hours for financial aid OR for other reasons don't want a refund of fees, but another course? A & R will be questioned. • Drop/add procedures may affect this policy. • How long after the first week of class? Certainly before 45th day? • We must have a testing center. How would this be managed? None of this [the policy as a whole] is practical at this point. We do not have the support, means, services, staff, leaders to implement it. What timeline are we talking about? When?

APPENDIX B

LOCAL NORMATIVE DATA

CONTENTS

I. **DISTRICT SUMMARY:** ASSET/MAPS PLACEMENT RECOMMENDATIONS & TEST SCORE RESULTS.....30

II. **ENGLISH** PLACEMENT RECOMMENDATIONS & TEST SCORE RESULTS

A. ACT/ASSET

1. CAMPUS BREAKDOWN (SCORE X COURSE).....31
2. DISTRICT DISTRIBUTION OF "LANGUAGE USAGE" SKILLS TEST.....32
3. DISTRICT DISTRIBUTION W/ CAMPUS MEAN SCORE SUMMARY..... 33

B. CB/MAPS

1. CAMPUS BREAKDOWN (SCORE X COURSE).....34
2. DISTRICT DISTRIBUTION OF "WRITING" SKILLS TEST.....35
3. DISTRICT DISTRIBUTION W/ CAMPUS MEAN SCORE SUMMARY.....36

III. **READING** PLACEMENT RECOMMENDATIONS & TEST SCORE RESULTS

A. ACT/ASSET

1 CAMPUS BREAKDOWN (SCORE X COURSE).....37
2. DISTRICT DISTRIBUTION OF READING SKILLS TEST.....38
3. DISTRICT DISTRIBUTION W/CAMPUS MEAN SCORE SUMMARY.....39

B. CB/MAPS

1. CAMPUS BREAKDOWN (SCORE X COURSE).....40
2. DISTRICT DISTRIBUTION OF READING SKILLS TEST.....41
3. DISTRICT DISTRIBUTION W/CAMPUS MEAN SCORE SUMMARY.....42

IV. **MATH** (ARITHMETIC ONLY) PLACEMENT RECOMMENDATIONS & TEST SCORE RESULTS

A. ACT/ASSET

1. CAMPUS BREAKDOWN (SCORE X COURSE).....43
2. DISTRICT DISTRIBUTION OF "NUMERICAL SKILLS" TEST.....44
3. DISTRICT DISTRIBUTION W/ CAMPUS MEAN SCORE SUMMARY.....45

B. CB/MAPS

1. CAMPUS BREAKDOWN (SCORE X COURSE).....46
2. DISTRICT DISTRIBUTION OF "COMPUTATION" SKILLS TEST.....47
3. DISTRICT DISTRIBUTION W/CAMPUS MEAN SCORE SUMMARY.....48

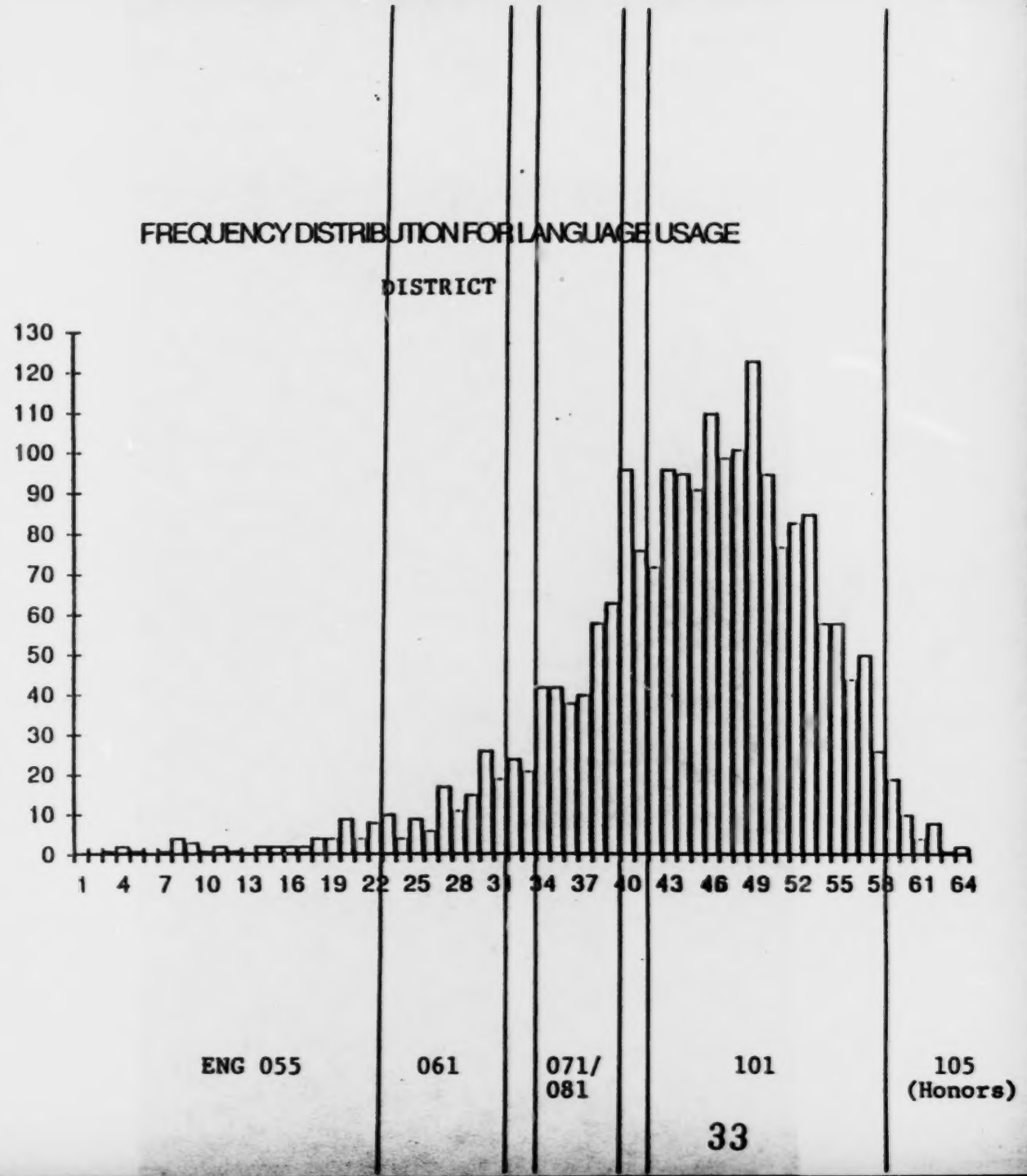
PILOT STUDENT ASSESSMENT PROJECT: CUT-OFF SCORE RESULTS

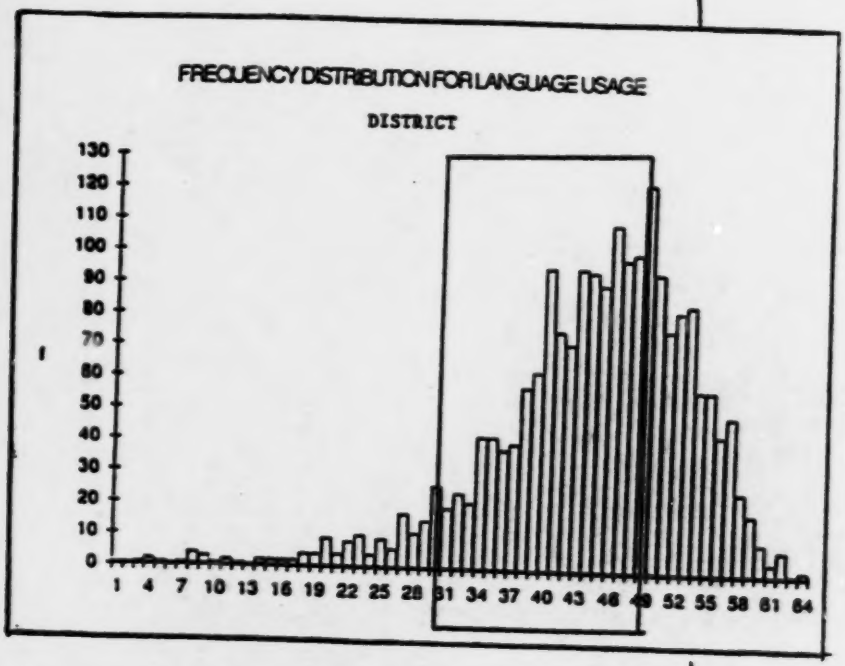
INSTRUCTIONAL COUNCIL RECOMMENDATIONS					RESULTS	
		PROJECTED:			ACTUAL:	
Ability Tested	Course Recs	% Students	# Correct ASSET	# Correct MAPS	Approximate ASSET	% Students MAPS
LANGUAGE USAGE/ WRITING	ENG 055		0 -22	0 -12	2%	4%
	ENG 061	10%	23-31	13-16	6%	7%
	D-ZONE	3%	32-33	17	2%	3%
	ENG 071			18-21		14.5%
	ENG 081	16%	34-39	22-23	14%	10.5%
	D-ZONE	8%	40-41	24	8%	6%
	ENG 101	60%	42-58	25-37	66%	54%
	ENG 105	2%	59+	38+	2%	1%
READING	RDG 1-3		0 - 11	0 - 10	5%	7%
	D-ZONE	20%	12-13	11-12	3%	4%
	RDG 090		14-16	13-15	6%	7%
	D-ZONE	4%	17-18	16	4%	3%
	RDG 091	26%	19-25	17-23	24%	32%
	D-ZONE	9%	26-27	24	8%	6%
	RDG 101	23%	28-33	25-28	26%	23%
	EXEMPT	18%	34+	29+	24%	18%
NUMERICAL SKILLS/ COMPUTATION	MTH 055	28%	0 - 14	0 - 18	27%	35%
	D-ZONE	28%	15-20	19-23	29%	23%
	MTH 077 or EA test	44%	21+	24+	44%	42%
ELEMENTARY ALGEBRA	MTH 077	48%	0 - 12	0 - 17	77%	?
	D-ZONE	24%	13-18	19-23	20%	?
	MTH 124/ 129 or IA test	28%	19+	24+	3%	?
ALGEBRA	MTH 124/ 129	48%	0 - 12	0 - 14	64%	?
	MTH 129/ 154	24%	13-18	15-22	32%	?
	MTH 154+	28%	19+	23+	4%	?

PILOT STUDENT ASSESSMENT PROJECT: ENGLISH

ASSET CUT-OFF SCORE RESULTS (Fall '85)--LANGUAGE USAGE

SCORE		0-22	23-31	32-33	34-39	40-41	42-58	59+	
COURSE		055	061	ZONE	071/081	ZONE	101	105	TOTALS
GCC:	n	5	9	5	19	15	103	1	**157**
	%	3	6	3	12	10	65	1	100%
MTCC:	n	4	11	5	26	12	44	3	**105**
	%	3	11	5	25	11	42	3	100%
MCC:	n	4	21	8	63	43	329	11	**479**
	%	1	4	2	13	9	69	2	100%
NVEC:	n	0	3	0	4	3	35	2	**47**
	%	0	6	0	9	6	75	4	100%
PC:	n	4	15	8	38	31	225	7	**328**
	%	1	4	2	12	10	69	2	100%
RSCC:	n	15	29	11	56	30	257	10	**408**
	%	4	7	3	14	7	63	2	100%
SCC:	n	2	8	3	50	34	338	8	**443**
	%	1	2	1	11	7	76	2	100%
SMCC:	n	19	21	5	27	4	32	2	**110**
	%	17	19	4	25	4	29	2	100%
MCCD:	n	53	117	45	283	172	1363	44	**2077**
	%	3	6	2	14	8	66	2	100%


FREQUENCY DISTRIBUTION FOR LANGUAGE USAGE
DISTRICT
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1 4 7 10 13 16 19 22 25 28 31 34 37 40 43 46 49 52 55 58 61 64
ENG 055
061
071/
081
101
105
(Honors)



SUMMARY DATA FOR MCCD/ASSET

LANGUAGE USAGE:

MEAN SCORES

Fall 1985 Data
(n=2077)

31 34 37 40 43 46

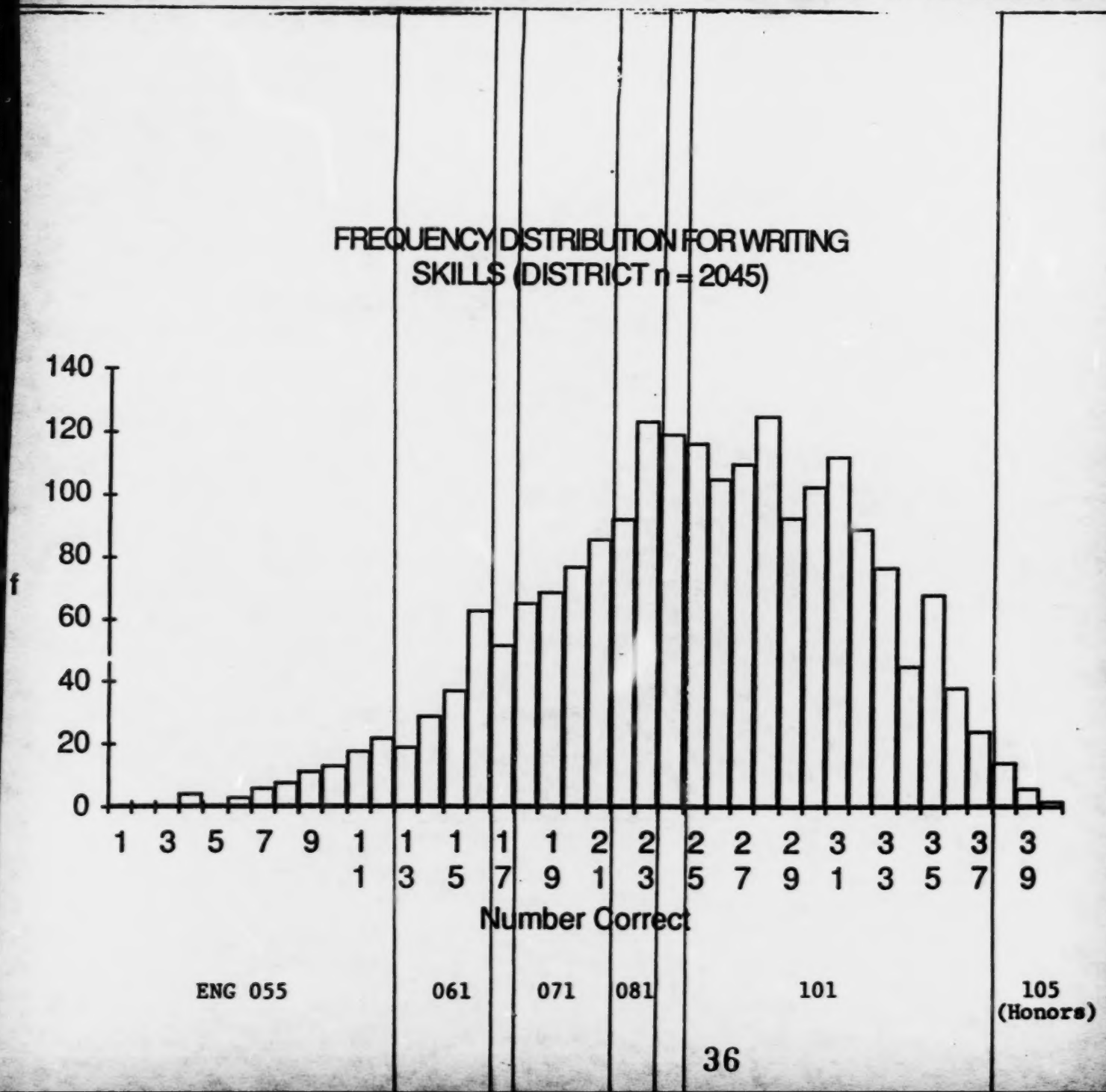
SMCC ($\bar{x}$=34.35)
MTCC ($\bar{x}$=40.53)
ACT REFERENCE DATA ($\bar{x}$=43.16)
GCC ($\bar{x}$=43.54)
RSCC ($\bar{x}$=44.00)

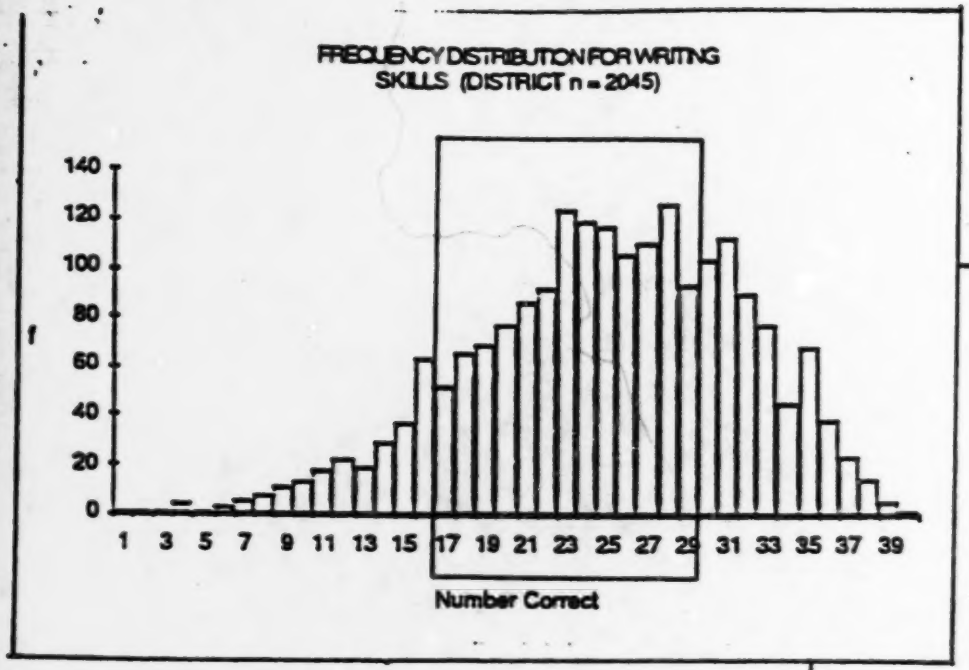
MCCD ($\bar{x}$=44.41)
MCC ($\bar{x}$=45.14)
PC ($\bar{x}$=45.65)
SCC ($\bar{x}$=46.56)
NEVEC ($\bar{x}$=46.85)

PILOT STUDENT ASSESSMENT PROJECT: ENGLISH

MAPS CUT-OFF SCORE RESULTS (Fall '85)--WRITING

SCORE		0-12	13-16	17	18-21	22-23	24	25-37	38+	
COURSE		055	061	ZONE	071	081	ZONE	101	105	TOTALS
GCC:	n	11	28	6	56	45	26	194	8	374
	%	3	7	2	15	12	7	52	2	100%
MTCC:	n	12	16	1	13	9	2	19	0	72
	%	17	22	1	18	13	3	26	0	100%
MCC:	n	13	32	9	47	43	26	241	6	417
	%	3	8	3	11	10	6	58	1	100%
NVEC:	n	0	6	2	3	4	4	79	0	98
	%	0	6	2	3	4	4	81	0	100%
PC:	n	13	9	7	38	26	14	133	5	245
	%	5	4	3	15	11	6	54	2	100%
RSCC:	n	6	11	0	24	19	13	125	2	200
	%	3	5	0	12	10	7	62	1	100%
SCC:	n	11	32	16	95	59	31	292	1	537
	%	2	6	3	17	11	6	54	≤1	100%
SMCC:	n	21	14	11	21	10	3	22	0	102
	%	21.5	14	11	21.5	10	3	21	0	100%
MCCD:	n	87	148	52	297	215	119	1105	22	2045
	%	4	7	3	14.5	10.5	6	54	1	100%


FREQUENCY DISTRIBUTION FOR WRITING SKILLS (DISTRICT n = 2045)
140
120
100
80
60
40
20
0
f
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39
Number Correct
ENG 055
061
071
081
101
105 (Honors)



SUMMARY DATA FOR MCCD/MAPS

WRITING:

MEAN SCORES

Fall 1985 Data
(n=2045)

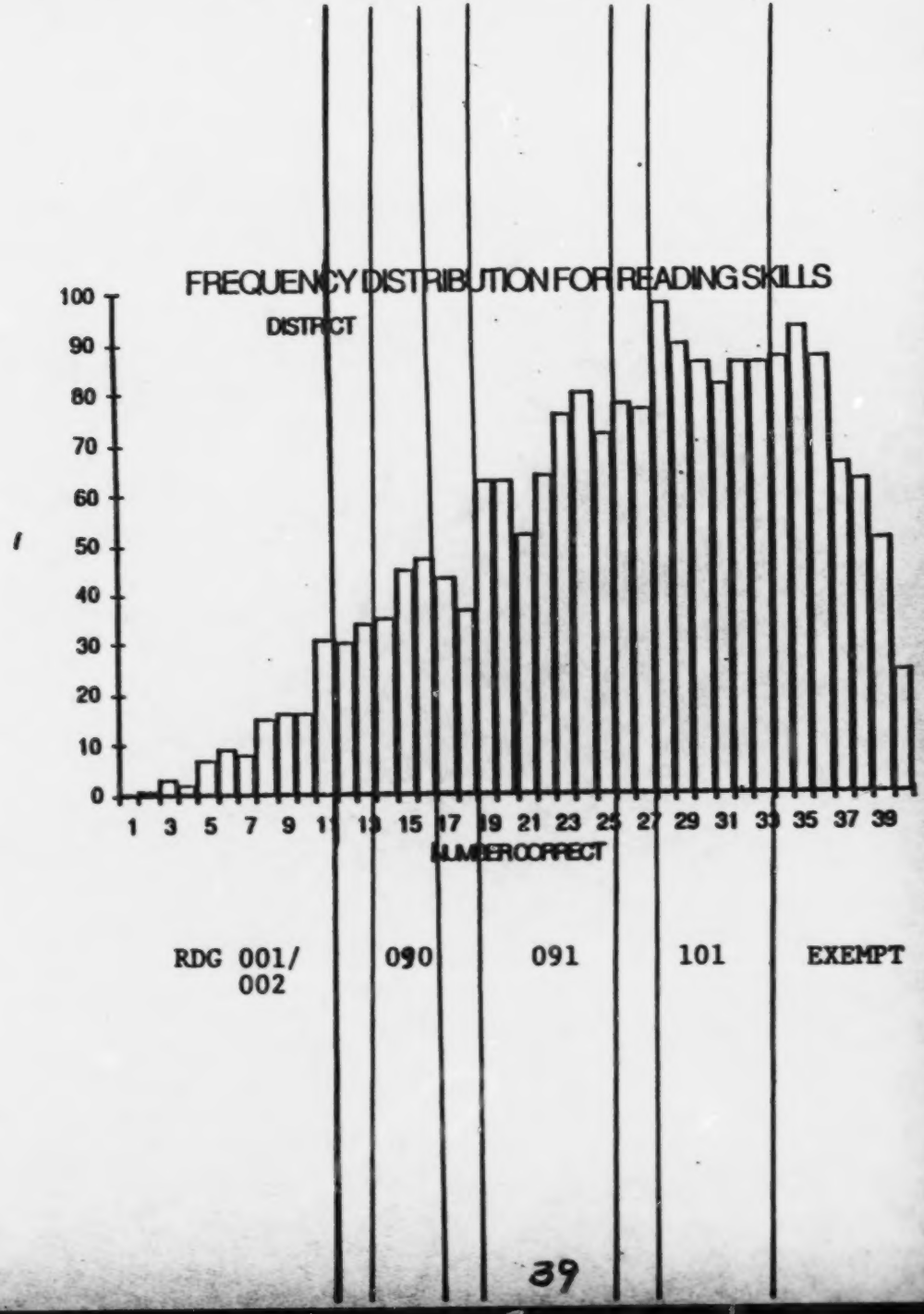
1 1 2 2 2 2 2
7 9 1 3 5 7 9

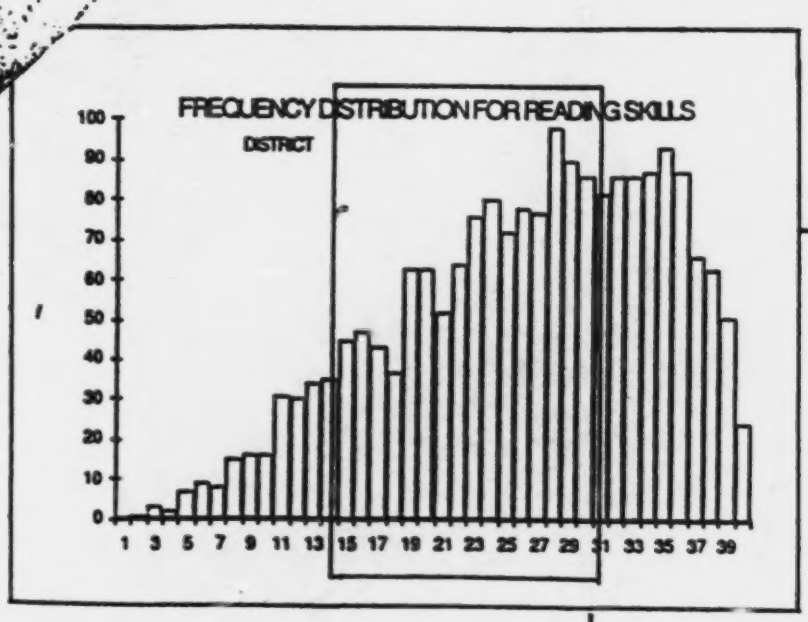
SMCC ($\bar{x}$=19.65)
MTCC ($\bar{x}$=19.65)
CB REFERENCE DATA ($\bar{x}$=25.00)
MCCD ($\bar{x}$=25.08)
SCC ($\bar{x}$=25.13)
GCC ($\bar{x}$=25.29)
PC ($\bar{x}$=25.51)
MCC ($\bar{x}$=25.52)
RSCC ($\bar{x}$=26.47)
NEVEC ($\bar{x}$=27.98)

PILOT STUDENT ASSESSMENT PROJECT: READING

ASSET CUT-OFF SCORE RESULTS (Fall '85)--READING

SCORE		0-11	12-13	14-16	17-18	19-25	26-27	28-33	34+
COURSE		1-3	ZONE	090	ZONE	091	ZONE	101	EXEMPT	TOTALS
GCC:	n	5	5	11	7	43	11	46	26	154
	%	3	3	7	5	28	7	30	17	100%
MTCC:	n	12	6	9	6	23	2	11	18	87
	%	14	7	10	7	26	2	13	21	100%
MCC:	n	20	18	27	14	124	38	128	109	478
	%	4	4	5	3	26	8	27	23	100%
NVEC:	n	2	0	1	0	11	3	14	17	48
	%	4	0	2	0	23	6	29	36	100%
PC:	n	12	6	20	16	77	35	77	85	328
	%	4	2	6	5	23	11	23	26	100%
RSCC:	n	16	9	26	18	71	30	84	103	357
	%	4	3	7	5	20	8	24	29	100%
SCC:	n	6	9	13	12	101	34	159	111	445
	%	1	2	3	3	23	7	36	25	100%
SMCC:	n	35	11	20	7	20	2	9	2	106
	%	33	10	19	7	19	2	8	2	100%
MCCD:	n	108	64	127	80	470	155	528	471	2003
	%	5	3	6	4	24	8	26	24	100%


FREQUENCY DISTRIBUTION FOR READING SKILLS
DISTRICT
100
90
80
70
60
50
40
30
20
10
0
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39
NUMBER CORRECT
RDG 001/ 002
090
091
101
EXEMPT



SUMMARY DATA FOR MCCD/ASSET

READING SKILLS:

MEAN SCORES

Fall 1985 Data
(n=2003)

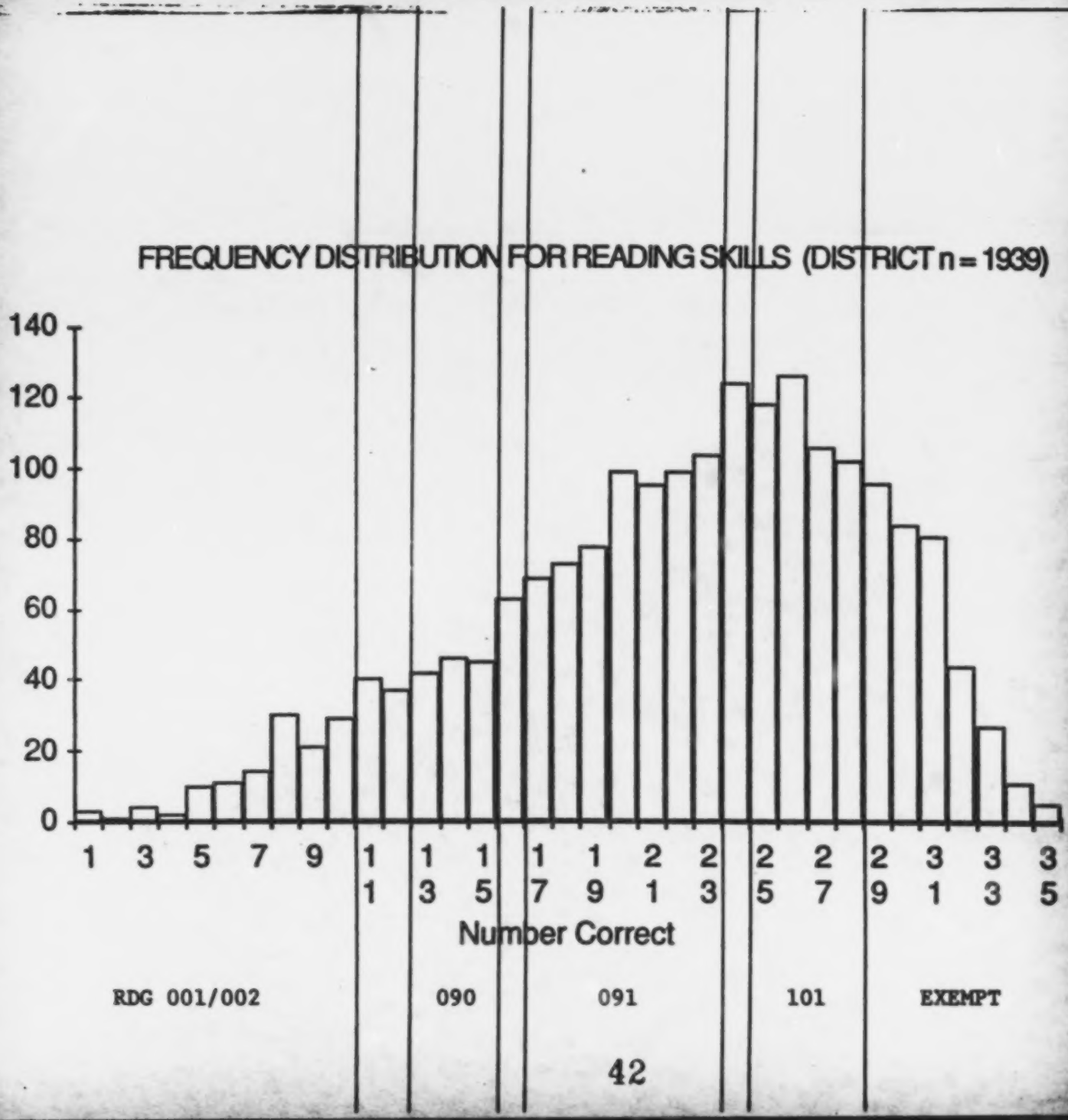
15 17 19 21 23 25 27 29 3

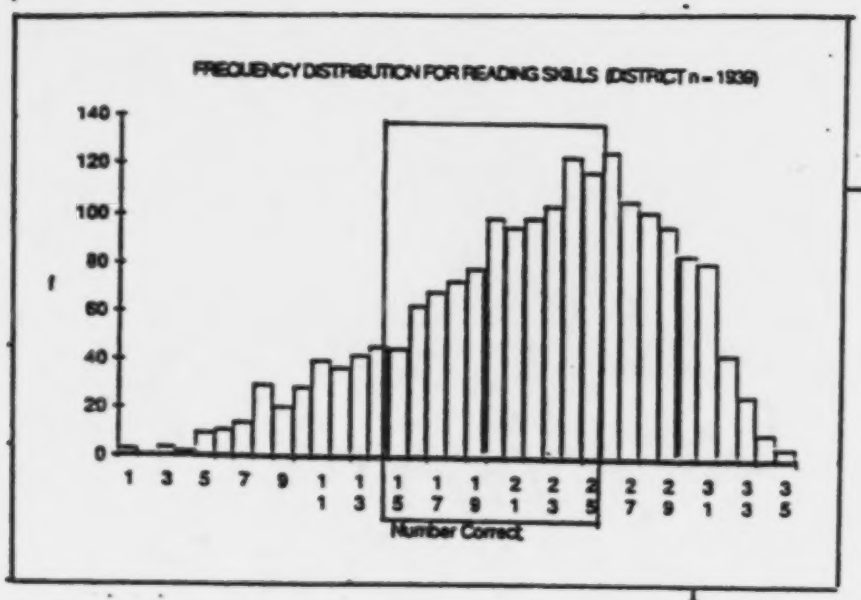
SMCC ($\bar{x}$=15.93)
MTCC ($\bar{x}$=22.71)
ACT REFERENCE DATA ($\bar{x}$=24.49)
GCC ($\bar{x}$=25.46)
MCCD ($\bar{x}$=26.35)
MCC ($\bar{x}$=26.46)
PC ($\bar{x}$=26.91)
RSCC ($\bar{x}$=27.16)
SCC ($\bar{x}$=28.33)
NEVEC ($\bar{x}$=29.33)

PILOT STUDENT ASSESSMENT PROJECT: READING

MAPS CUT-OFF SCORE RESULTS (Fall '85)--READING

SCORE		0-10	11-12	13-15	16	17-23	24	25-28	29+	
COURSE		1-3	ZONE	090	ZONE	091	ZONE	101	EXEMPT	TOTALS
GCC:	n	19	21	31	12	106	29	84	71	373
	%	5	6	8	3	28	8	23	19	100%
MTCC:	n	10	6	4	2	13	0	10	5	50
	%	20	12	8	4	26	0	20	10	100%
MCC:	n	19	10	24	11	136	31	109	77	417
	%	5	2	6	3	33	7	26	18	100%
NVEC:	n	0	0	2	0	4	1	4	4	15
	%	0	0	13	0	27	6	27	27	100%
PC:	n	16	9	17	8	88	10	51	45	244
	%	7	4	7	3	36	4	21	18	100%
RSCC:	n	8	5	10	9	49	7	57	55	200
	%	4	2	5	4	25	3	29	28	100%
SCC:	n	19	20	32	16	194	42	127	88	538
	%	4	4	6	3	36	8	23	16	100%
SMCC:	n	34	6	13	5	27	4	10	3	102
	%	33	6	13	5	26	4	10	3	100%
MCCD:	n	125	77	133	63	617	124	452	348	1939
	%	7	4	7	3	32	6	23	18	100%


FREQUENCY DISTRIBUTION FOR READING SKILLS (DISTRICT n = 1939)
f
140
120
100
80
60
40
20
0
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35
Number Correct
RDG 001/002
090
091
101
EXEMPT

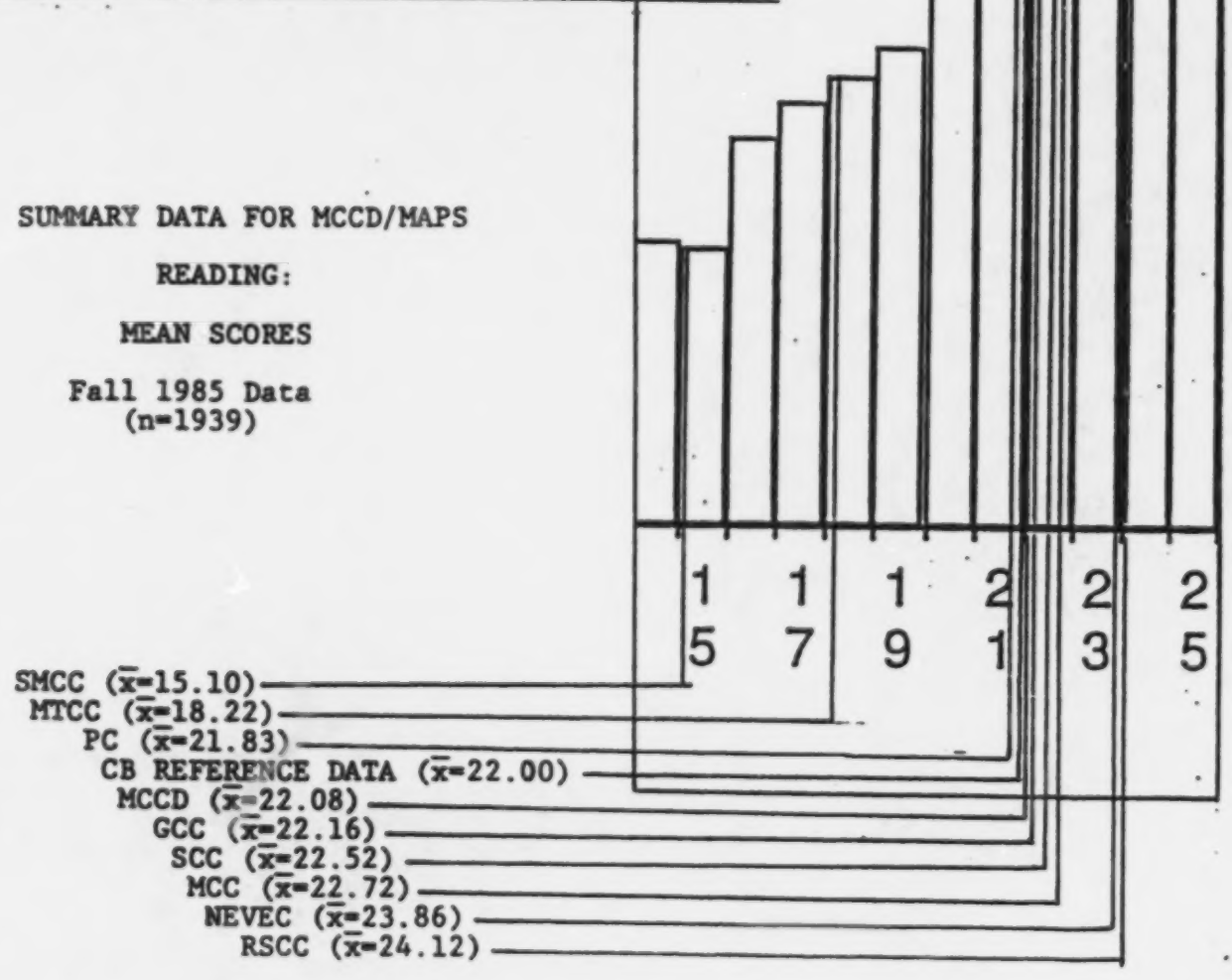


SUMMARY DATA FOR MCCD/MAPS

READING:

MEAN SCORES

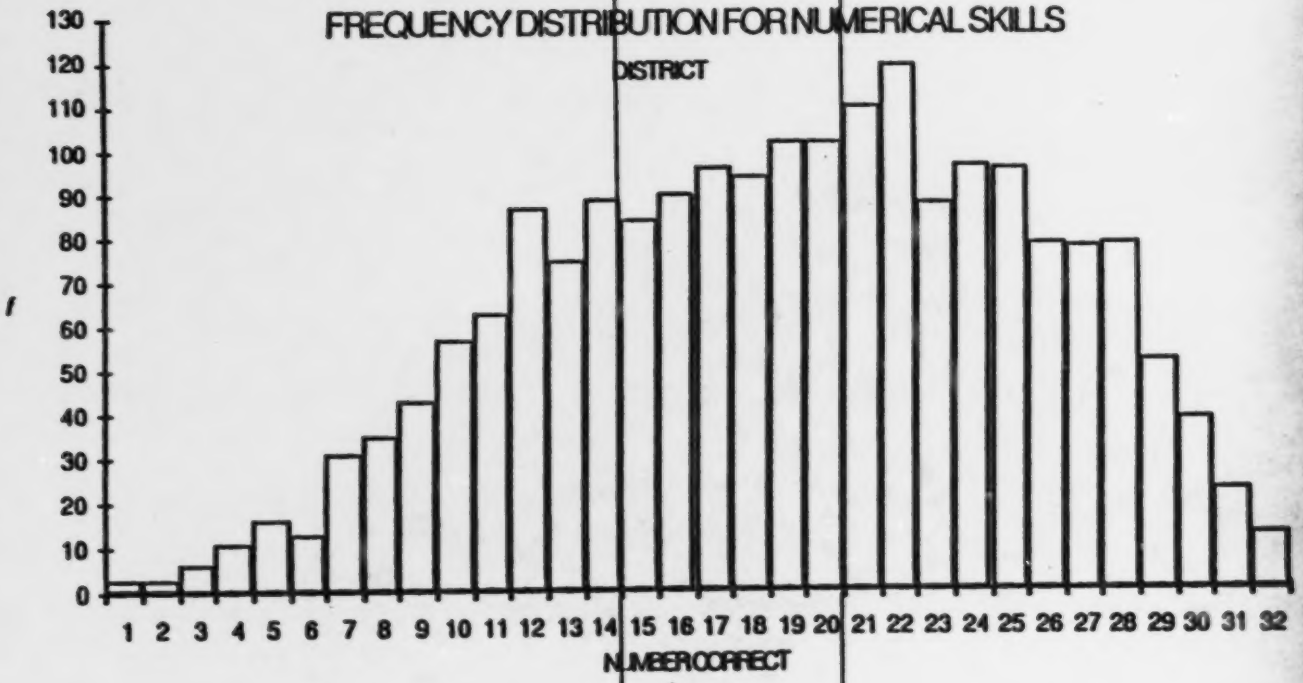
Fall 1985 Data
(n=1939)



PILOT STUDENT ASSESSMENT PROJECT: MATH

ASSET CUT-OFF SCORE RESULTS (Fall '85)--NUMERICAL SKILLS

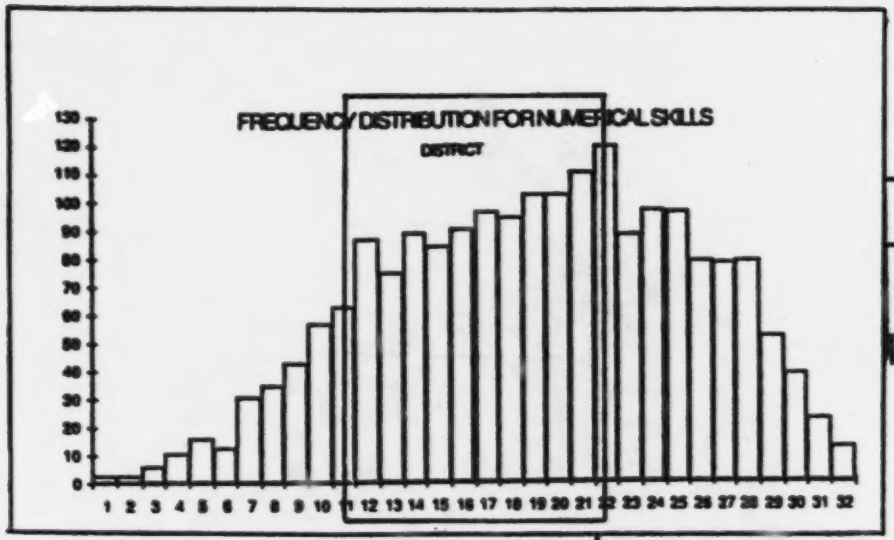
SCORE		0-14	15-20	21+	
COURSE		055	ZONE	077 or Elementary Algebra test	TOTALS
GCC:	n	42	36	35	113
	%	37	32	31	100%
MTCC:	n	75	45	45	165
	%	46	27	27	100%
MCC:	n	95	155	255	475
	%	20	33	47	100%
NVEC:	n	11	14	20	45
	%	24	31	45	100%
PC:	n	70	97	160	327
	%	21	30	49	100%
RSCC:	n	92	66	130	298
	%	31	25	44	100%
SCC:	n	66	130	246	442
	%	15	29	56	100%
SMCC:	n	81	15	12	108
	%	75	14	11	100%
MCCD:	n	532	568	873	1973
	%	27	29	44	100%



MAT 055

DECISION ZONE

077 OR Elementary Algebra Test



TION FOR NUMER

TRICT

SUMMARY DATA FOR MCCD/ASSET

NUMERICAL SKILLS:

MEAN SCORES

Fall 1985 Data
(n=1973)

1 12 13 14 15 16 17 18 19 20 21 2

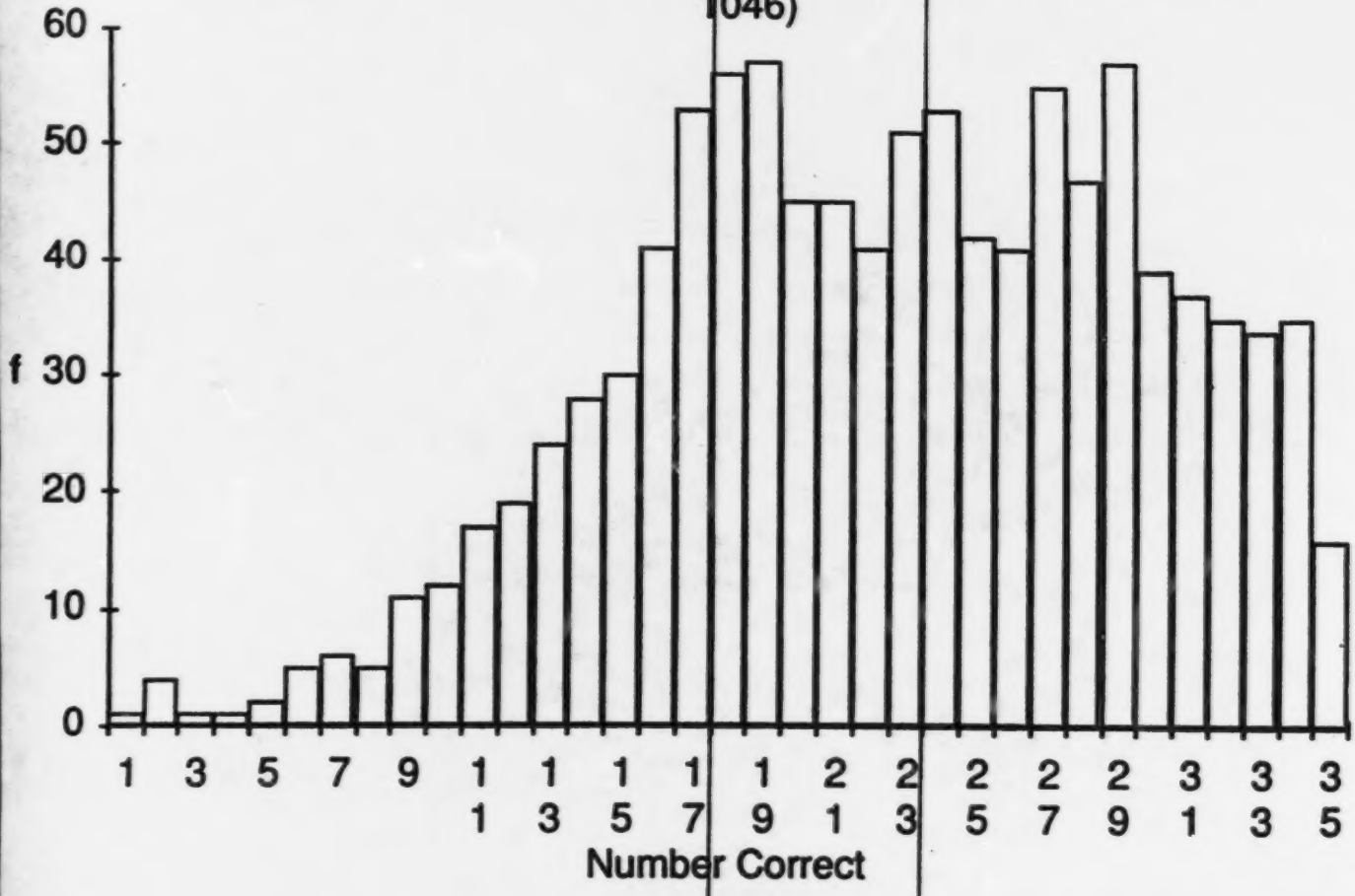
SMCC ($\bar{x}$=12.06)
MTCC ($\bar{x}$=16.35)
GCC ($\bar{x}$=17.05)
RSCC ($\bar{x}$=18.77)
ACT REFERENCE DATA ($\bar{x}$=18.81)
MCCD ($\bar{x}$=19.01)
SCC ($\bar{x}$=20.8
MCC ($\bar{x}$=19.80
PC ($\bar{x}$=19.79)
NEVEC ($\bar{x}$=19.16)

PILOT STUDENT ASSESSMENT PROJECT: MATH

MAPS CUT-OFF SCORE RESULTS (Fall '85)--COMPUTATION

SCORE		0-12	13-18	19+	
COURSE		055	ZONE	077 or Elementary Algebra test	TOTALS
GCC:	n	11	40	158	209
	%	5	19	76	100%
MTCC:	n	10	10	46	66
	%	15	15	70	100%
MCC:	n	13	43	140	196
	%	7	22	71	100%
NVEC:	n	0	0	3	3
	%	0	0	100	100%
PC:	n	12	22	59	93
	%	13	24	63	100%
RSCC:	n	8	28	98	134
	%	6	21	73	100%
SCC:	n	7	56	187	250
	%	3	22	75	100%
SMCC:	n	23	33	39	95
	%	24	35	41	100%
MCCD:	n	84	232	730	1046
	%	8	22	70	100%

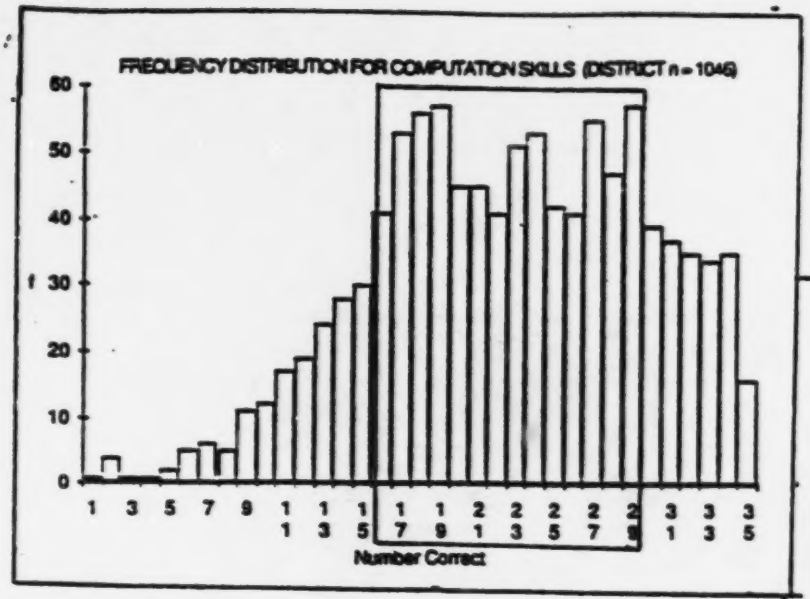
FREQUENCY DISTRIBUTION FOR COMPUTATION SKILLS (DISTRICT n= 1046)



MAT 055

DECISION ZONE

MAT 077 OR Elementary Algebra Tes

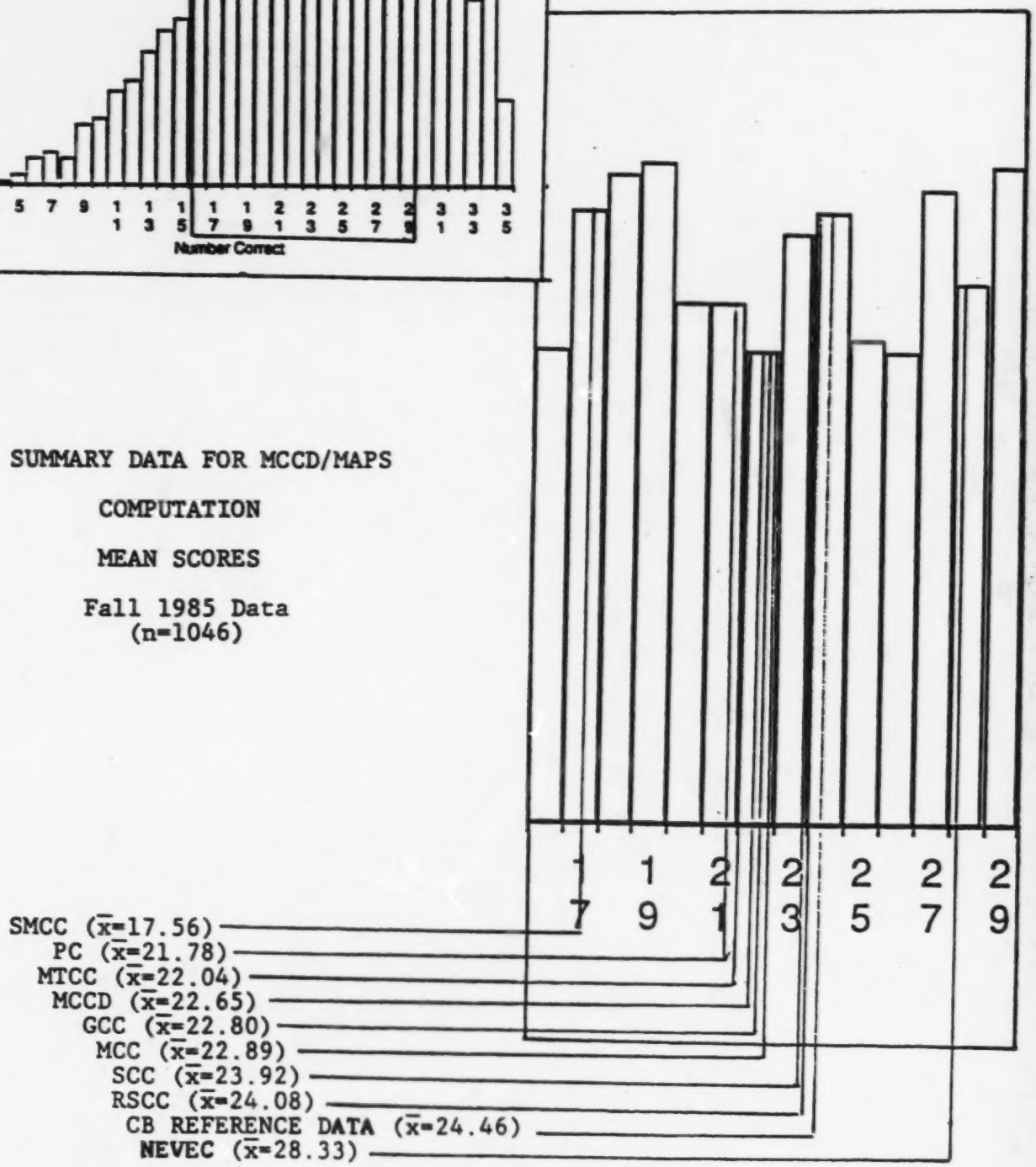

FREQUENCY DISTRIBUTION FOR COMPUTATION SKILLS (DISTRICT n = 1046)
60
50
40
f 30
20
10
0
1 3 5 7 9 1 1 1 1 1 1 2 2 2 2 2 3 3 3
1 3 5 7 9 1 3 5
Number Correct

SUMMARY DATA FOR MCCD/MAPS

COMPUTATION

MEAN SCORES

Fall 1985 Data
(n=1046)



APPENDIX C

SELECT TECHNICAL PROPERTIES of the ACT/ASSET AND COLLEGE BOARD/ MAPS: A SUMMARY OF RELIABILITY AND VALIDITY

CONTENTS

PART I: RELIABILITY..... 51

PART II: VALIDITY..... 52

I. CONTENT VALIDITY: ITEM SPECIFICATIONS..... 52

A. ENGLISH..... 52
1. ASSET--LANGUAGE USAGE..... 52
2. MAPS--WRITING..... 52

B. READING..... 53
1. ASSET--READING..... 53
2. MAPS--READING..... 54

C. MATHEMATICS..... 54
1. ASSET..... 54
a. Numerical Skills..... 54
b. Elementary Algebra..... 55
c. Intermediate Algebra..... 56
2. MAPS..... 56
a. Arithmetic..... 57
b. Elementary Algebra..... 57
c. Intermediate Algebra..... 57

II. PREDICTIVE VALIDITY: SCORE-GRADE CORRELATIONS..... 58

A. ENGLISH..... 59
1. ASSET..... 59
a. Technical Manual Coefficients..... 59
b. MCCCD Coefficients..... 59
2. MAPS..... 59
a. Technical Manual Coefficients..... 59
b. MCCCD Coefficients..... 59

Contents-Continued

B. READING 59
1. ASSET 59
a. Technical Manual Coefficients 59
b. MCCCD Coefficients 59
2. MAPS 60
a. Technical Manual Coeffcients 60
b. MCCCD Coefficients 60

C. MATHEMATICS 60
1. ASSET 60
a. Technical Manual Coefficients 60
b. MCCCD Coefficients 60
2. MAPS 61
a. Technical Manual Coefficients 61
b. MCCCD Coefficients 61

PART I: RELIABILITY

Both ACT and College Board report an internal consistency estimate of reliability, using the Kuder-Ricahrdson formula (KR-20). This formula is used to measure the extent towhich test items are correlated with one another. The standard error of estimate (SEM) for each test is also reported. A summary of reliability for both ACT's ASSET and College Board's MAPS is provided below.

[*NOTE: All figures were obtained from the following sources:
ACT ASSET Technical Manual, 1986, American College Testing Program;
Assessment and Placement Services for Community Colleges: Using and Interpreting Scores, 1984, College Entrance Examination Board; Guide to the Use of the Descriptive Tests of Mathematics Skills, 1985, College Entrance Examination Board.]

	ASSET		MAPS	
	KR-20 Reliability	SEM	KR-20 Reliability	SEM
ENGLISH	.87	3.10	.83	3.90
READING	.91	2.65	.90	3.31
ARITHMETIC	.88	2.23	.87	2.10
ELEMENTARY ALGEBRA	.76	2.14	.91	2.30*
INTERMEDIATE ALGEBRA	.81	2.16	.86	2.50*

(*SEM derived using scaled scores)

PART II: VALIDITY

I. CONTENT VALIDITY: ITEM SPECIFICATIONS

A. ENGLISH

1. ASSET--LANGUAGE USAGE

"The Language Usage test contains 64 items and is designed to assess basic skills in the areas of punctuation, grammar, diction and style, sentence structure, capitalization, spelling and logic and organization. The test consists of 16 sentences, each having four underlined parts. The examinee responds to each underlined part by indicating whether it is corect or incorrect. Eleven minutes are allowed for taking this test."
(From the ACT ASSET Technical Manual, 1986, p. 5.)

Language Usage Content Specifications

Content Area	Number of Items	Proportion of Test
Punctuation	18	0.28
Grammar	16	0.25
Diction and Style	4	0.06
Sentence Structure	13	0.20
Capitalization	10	0.16
Spelling	2	0.03
Logic and Organization	1	0.02

ACT ASSET Technical Manual, p. 6

2. MAPS--WRITING

"The 25-minute Written English Expression test contains 40 4-choice questions designed to measure a student's ability to do the kind of writing usually required of students in colleges. The items require the student to recognize errors in grammar, usage, choice of words, and idiom. The test emphasizes correctness of expression along with other kinds of writing problems. Since faculty stress aspects of writing other than correctness, such as style, the test places emphasis on the structure of the sentence, the logical relationship of items, and on the clear expression of ideas."
(From Assessment and Placement Services for Community Colleges: Using and Interpreting Scores, 1984, p. 6.)

Writing Content Specifications

Content Area	Number of Items	Proportion of Test
Sentence recognition	4	0.10
Sentence structure	6	0.15
Pronoun problems	6	0.15
Language and style	5	0.125
Verb problems	2	0.05
Logic	9	0.225
Recognition of error-free construction	8	0.20

Extrapolated from pp. 6-7 of Assessment and Placement Services for Community Colleges: Using and Interpreting Scores

B. READING

1. ASSET–READING SKILLS

"The Reading Skills test is designed to assess the ability of the examinee to read and understand factual material. It also tests the more subtle aspects of comprehension, such as interpretation of information and extrapolation beyond given information. The test is composed of five passages, each followed by eight four-option multiple-choice items. A total time of 20 minutes is allowed for the 40 items." (From the ACT ASSET Technical Manual, 1986, p. 6.)

Reading Skills Content Specifications

Content Area	Number of Items	Proportion of Test
Obtaining factual information	15	0.38
Interpreting information	15	0.37
Extrapolation	10	0.25

ACT ASSET Technical Manual, p. 6

2. MAPS--READING

"The 25-minute Reading test contains 35 4-choice questions based on 8 reading passages. These selections, by modern writers, deal with natural sciences, social sciences, and contemporary life. They vary in style and exemplify different types of writing: straightforward reporting, persuasive writing, description. Questions measure the students' comprehension of both main ideas and specific details and their ability to make inferences and extract the meaning of vocabulary in context." (From Assessment and Placement Services for Community Colleges: Using and Interpreting Scores, 1984, p. 6.)

Reading Content Specifications

Content Area	Number of Items	Proportion of Test
Understanding the main idea	8	0.229
Understanding the secondary idea	9	0.257
Ability to make inferences	9	0.257
Understanding vocabulary in context	9	0.257

Extrapolated from p. 6 of Assessment and Placement Services for Community Colleges: Using and Interpreting Scores

C. MATHEMATICS

1. ASSET

a. Numerical Skills

"The Numerical Skills test, which includes 32 five-option multiple-choice items, is designed to assess basic numerical skills in the performance of operations with whole numbers, decimals, and fractions and to assess basic word-problem solving skills involving arithmetic. Eighteen minutes are allowed for this test." (From the ACT ASSET Technical Manual, 1986, pp. 6-7.)

Numerical Skills Content Specifications

Content Area	Number of Items	Proportion of Test
Operations with:		
Whole numbers	5	0.16
Decimals	8	0.25
Fractions	6	0.19
Word problems in arithmetic	13	0.40

ACT ASSET Technical Manual, p. 7

b. Elementary Algebra

"This test is designed to assess skills commonly included in the first high school algebra course. These skills include: operations with whole and rationalnumbers; properties of real numbers and number systems; formulas and equations; word problems involving real numbers; averages; absolute values; signed numbers; number theory; evaluating algebraic expressions; algebraic factoring; and linear equations in one unknown. The Elementary Algebra test is a 25-minute test composed of 25 five-option multiple-choice items." (From the ACT ASSET Technical Manual, 1986, p. 7.)

Elementary Algebra Content Specifications

Content Area	Number of Items	Proportion of Test
Operations with:		
Whole numbers	2	0.08
Rational numbers	3	0.12
Properties of: Real numbers	2	0.08
Number systems	1	0.04
Formulas and equations	3	0.12
Word problems	2	0.08
Averages	1	0.04
Absolute values	1	0.04
Signed numbers	2	0.08
Number theory	2	0.08
Algebraic expressions	2	0.08
Algebraic factoring	2	0.08
Linear equations in one unknown	2	0.08

ACT ASSET Technical Manual, p. 8

c. Intermediate Algebra

"The Intermediate Algebra Skills test is a 25-item test assessing skills in the areas of polynomial operations; algebraic factoring; algebraic fractions; linear and quadratic equations in one unknown; graphing of linear and quadratic functions; exponents and square roots; direct and inverse variation; and simultaneous linear equations in two unknowns. All of the items are five-option multiple-choice items. Twenty-five minutes are allowed for this test." (From the ACT ASSET Technical Manual, 1986, p. 8.)

Intermediate Algebra Content Specifications

Content Area	Number of Items	Proportion of Test
Polynomial operations	3	0.12
Algebraic factoring	5	0.20
Algebraic fractions	4	0.16
Equations in one unknown	3	0.12
Graphing functions	2	0.08
Exponents and square roots	4	0.16
Direct and inverse variation	1	0.04
Simultaneous equations	3	0.12

ACT ASSET Technical Manual, p. 9

2. MAPS

"The DTMS [Descriptive Tests of Mathematics Skills] include...tests that may be used separately or in any combination. Within each test, questions are organized into clusters designed to give descriptive information about a student's strengths and weaknesses in specific skill areas. These clusters contain from 6 to 17 questions each."Each test is timed at 30 minutes. Each test's items are 4-option mutiple-choice items. The Arithmetic and Elementary Algebra skills tests have 35 questions each, while the Intermediate Algebra test has 30 questions. (From the Guide to the Use of the Descriptive Tests of Mathematics Skills, 1985, p. 3.)

a. Arithmetic

Arithmetic Content Specifications (Form A)

Content Area	Number of Items	Proportion of Test
Operations with:		
Whole numbers	9	0.26
Fractions	10	0.285
Decimals and percent	10	0.285
Applications involving computations	6	0.17

Extrapolated from p. 3 of Guide to the Use of the Descriptive Tests of Mathematics Skills

b. Elementary Algebra

Elementary Algebra Content Specifications (Form A)

Content Area	Number of Items	Proportion of Test
Operations with:		
Real numbers	9	0.26
Algebraic expressions	17	0.48
Solutions of equations, inequalities and word problems	9	0.26

Extrapolated from p. 3 of Guide to the Use of the Descriptive Tests of Mathematics Skills

c. Intermediate Algebra

Intermediate Algebra Content Specifications (Form A)

Content Area	Number of Items	Proportion of Test
Algebraic operations	10	0.33
Solution of equations and inequalities	10	0.33
Coordinate plane and graphs	10	0.33

Extrapolated from p. 3 of Guide to the Use of the Descriptive Tests of Mathematics Skills

II. PREDICTIVE VALIDITY: SCORE-GRADE CORRELATIONS

The College Board states: "A demonstration of predictive validity may be irrelevant for certain placement decisions (Willingham, 1974; Cronbach & Snow, 1977). Indeed, Cronbach (1971) states the case in the extreme, asserting that 'a validity coefficient' indicating that Test X predicts success within a treatment tells nothing about its usefulness for placement. ...In other words, it is of little use to predict that students would fail in Course B unless you can show that they would be more likely to suceed had they taken Course A first." (From Validation of the Descriptive Tests of Mathematics Skills, 1980, Educational Testing Service.)

Nevertheless, predictive validity coefficients are reported with respect to the results of ASSET and MAPS test scores at the beginning of the semester with end-of-course grades. Two kinds of validity coefficients will be summarized in this report: correlations reported in the tests' technical manual(s), and correlations obtained within the Pilot Student Assessment Project for the Maricopa County Community College District as a whole.

Technical manual coefficients report the following correlations: English test scores with course grades for courses in English or related content areas; reading test scores with course grades for courses in reading or that report a heavy reading component; math scores by content area (e.g., arithmetic, elementary algebra) with course grades for courses demanding these respective skills.

MCCCD coefficients were obtained by correlating English test scores with grades obtained in English courses, reading test scores with grades obtained in reading courses and arithmetic test scores with grades obtained in math courses.

Note that ACT provides the following caution with respect to interpreting the results of validity studies:

"Because of some degree of restricted variability in most of the test score distributions, it should be noted that the correlations reported probably underestimate the true relationship and grades for the community college population. Typically ASSET test scores are used to place students in courses. Therefore, when placement has already occured, the students are likely to be more homogeneous than if test scores were not used for placement. For example, students with generally lower Language Usage scores may be placed into a first-level English course and those scoring higher into a second-level course. Consequently, the test scores for the students in each course will be somewhat restricted and the correlations will be lower than in situations with no range restriction. Higher correlations between test scores and course grades would be expected if the sample were comprised of students who had not been placed on the basis of the test score." (From the ACT ASSET Technical Manual, 1986, p. 26.)

A. ENGLISH

1. ASSET

a. Technical Manual Coefficients
Range: .150 to .301

b. MCCCD Coefficients
Range: -1.00 to .96

Eng 055 (n = 2); r = -1.00*
Eng 061 (n = 14); r = 0.18*
Eng 071 (n = 119); r = 0.21
Eng 081 (n = 38); r = 0.04*
Eng 101 (n = 754); r = 0.25
Eng 105 (n = 3); r = 0.96*

*Caution: This correlation is based on a relatively small N-count.

2. MAPS

a. Technical Manual Coefficients
Range: 0.03 to .55

b. MCCCD Coefficients
Range: 0.08 to .27

Eng 055 (n < 25); -------
Eng 061 (n < 25); -------
Eng 071 (n = 155); r = 0.08
Eng 081 (n = 56); r = 0.27
Eng 101 (n = 896); r = 0.23
Eng 105 (n < 25); -------

B. READING

1. ASSET

a. Technical Manual Coefficients
Range: .147 to .417

b. MCCCD Coefficients
Range: -0.06 to 0.03

Rdg 001 (n = 0); -------
Rdg 002 (n = 2); r = 0.00*
Rdg 090 (n = 18); r = -0.06*
Rdg 091 (n = 93); r = 0.03
Rdg 101 (n = 63); r = -0.00

*Caution: This correlation is based on a relatively small N-count.

2. MAPS

a. **Technical Manual Coefficients**
Range: -0.01 to .51

b. **MCCCD Coefficients**
Range: -0.15 to .34

Rdg 001 (n < 25); ------
Rdg 002 (n < 25); ------
Rdg 090 (n < 25); ------
Rdg 091 (n = 30); r = -0.15
Rdg 101 (n =171); r = 0.00
Exempt (n = 104); r = 0.34

C. MATHEMATICS

1. ASSET

a. Technical Manual Coefficients
   i. Numerical Skills
      Range: .270 to .417
   ii. Elementary Algebra
      Range: .224 to .270
   iii. Intermediate Algebra
      r = .323

b. MCCCD Coefficients
   Range: 0.00 to .60

Mth 055 (n = 68); r = 0.38
Mth 077 (n = 297); r = 0.26
Mth 124 (n = 48); r = 0.00*
Mth 129 (n = 74); r = 0.18
Mth 154 (n = 17); r = 0.60*

*Caution: This correlation is based on a relatively small N-count.

2. MAPS

a. Technical Manual Coefficients

i. Arithmetic Scores/Arithmetic Course Grades
Range: .33 to .66

ii. Elementary Algebra Scores/Intermediate Algebra Courses
Range: .25 to .62

iii. Intermediate Algebra Scores/Precalculus Course Grades
Range: .21 to .58

b. MCCCD Coefficients

i. Arithmetic Scores/Math Course Grades
Range: 0.01 to .12

Mth 055 (n = 68); r = 0.03
Mth 077 (n = 170); r = 0.07
Mth 124 (n = 44); r = 0.01
Mth 129 (n = 113); r = 0.12
Mth 154 (n = 25); r = 0.08

ii. Elementary Algebra Scores/Math Course Grades
Range: .14 to .43

Mth 055 (n < 25); ------
Mth 077 (n = 136); r = 0.14
Mth 124 (n = 61); r = 0.20
Mth 129 (n = 125); r = 0.19
Mth 154 (n = 26); r = 0.43

iii. Intermediate Algebra Scores/Math Course Grades
r = .27

Mth 129 (n = 62); r = 0.27

APPENDIX D

BUDGET BREAKDOWN (DRAFT)

PILOT STUDENT ASSESSMENT PROJECT: BUDGET BREAKDOWN
(DRAFT)

Costs for tests and research services: **OPTIONS**

1. ACT'S ASSET tests and services

	Ordering Prices	Averaged Price
ACT services		
Test Booklets	.50	.05
Answer sheets		
Student information forms	2.25(A) /2.40(B)	2.25(A)/2.40(B)
Scoring materials		
Research services		
SUBTOTAL (per student)	**2.75(A)/2.90(B)**	**2.30(A)/2.45(B)**

	Start-up Costs	Continuation Costs
MCCCD services		
Personnel/Labor (wages + benefits)		
Programming:		
• 1 Programmer Analyst I (Grade 16)		
80 hrs • 12.10/hr x .25	1210.00	.00
• 1 Programmer Analyst I		
8 hrs • 12.10/hr x .25	.00	121.00
SUBTOTAL (per semester)	**1210.00**	**121.00**
SUBTOTAL (per student) (Estimated cost/student based on Fall'85 n=2242)	**.54**	**.05**
TOTAL (per student)	**3.29(A)/3.44(B)**	**2.35(A)/2.50(B)**
• District cost	.54	.05
• Campus cost	2.75(A)/2.90(B)	2.30(A)/2.45(B)

(A) Based on an order of >5,000 "student sets."
(B) Based on an order of 1-4,999 "student sets."

2. College Board's MAPS tests and services

	Ordering Prices	Averaged Price
COLLEGE BOARD services		
Test booklets	2.50	.25
Answer sheets	.08	.08
Student information forms	.27	.27
Scoring materials	.05	.05
Research services	.21	.21
SUBTOTAL (per student)	**3.11**	**.86**

	Start-Up Costs	Continuation Costs
MCCCD services		
Personnel/Labor (wages + benefits)		
Programming:		
• 1 Programmer Analyst I (Grade 16)		
80 hrs • 12.10/hr x .25	1210.00	.00
• 1 Programmer Analyst I		
8 hrs • 12.10/hr x .25	.00	121.00
Data Entry:		
1 Data Conversion Coordinator (Grade 6)		
40 hrs • 7.60/hr x .32	401.00	401.00
OR		
8 Data Conversion Coordinators		
5 hrs • 7.60/hr = $38 x 8		
Clerical Support:		
8 Clerk Typists (Grade 1)		
16 hrs • 5.93/hr = $95 x 8 x .38	1049.00	1049.00

Supplies		
• 16 magnetic tapes • $10/tape	160.00	160.00
• supplies • $5/campus x 8	40.00	40.00
SUBTOTAL (per semester)	**2860.00**	**1771.00**
SUBTOTAL (per student) (Estimated cost/student based on Fall'85 n=2113)	**1.35**	**.84**
TOTAL (per student)	**4.46**	**1.70**
• District cost (w/data entry)	.76	.25
• Campus cost (w/o data entry)	3.70	1.45
• District cost (w/o data entry)	.57	.06
• Campus cost (w/ data entry)	3.89	1.64

***Note: ASSET costs per student remain fixed no matter how many students are involved in testing, as ACT absorbs personnel/supply costs in their price. MAPS costs per student will vary according to sample size due to personnel/supply costs varying in proportion to the number of students tested.**

3. College Board's MAPS tests and MCCCD services

	Ordering Prices	Averaged Price
COLLEGE BOARD services		
Test booklets	2.50	.25
Answer sheets	.08	.08
Scoring materials	.05	.05
SUBTOTAL (per student)	**2.63**	**.38**

MCCCD services: PENDING ANALYSIS

Estimated costs (ASSET v. MAPS) for Assessment Program

Estimated new students x campus:	FALL	SPRING	TOTAL*
GCC	8342	5693	14035
MTCC	1703	1012	2715
MCC	10444	6939	17383
PC	7273	4912	12185
RSCC	6667	3858	10525
SCC	4794	3286	8080
SMCC	892	441	1333

* Figures based on 1985-86 headcounts. New student estimates derived on the basis of 60% of the Fall enrollment (Sept 24 report from Mary Day) and 40% of the Spring enrollment (Feb 4 report from Mary Day).

CAMPUS	Target Group (N)	ASSET (Ordering Prices + $2.80(A)/$2.95(B)	v. MAPS Continuation Costs) $3.95
GCC	14035	$39,298 (A)	$55,438
MTCC	2715	$ 8,009 (B)	$10,724
MCC	17383	$48,672 (A)	$70,460
PC	12185	$34,118 (A)	$48,131
RSCC	10525	$29,470 (A)	$41,574
SCC	8080	$22624 (A)	$31,916
SMCC	1333	$ 3,932 (B)	$ 5,265

CAMPUS	Target Group (N)	ASSET (Averaged Price + $2.35 (A)/$2.50 (B)	v. MAPS Continuation Costs) $1.70
GCC	14035	$32,982 (A)	$23,860
MTCC	2715	$ 6,788 (B)	$ 4,616
MCC	17383	$40,850 (A)	$29,551
PC	12185	$28,635 (A)	$20,715
RSCC	10525	$24,734 (A)	$17,893
SCC	8080	$18,988 (A)	$13,736
SMCC	1333	$ 3,333 (B)	$ 2,266

APPENDIX E

CAMPUS PROJECT COORDINATOR/TEST ADMINISTRATOR EVALUATIONS OF THE ACT/ASSET AND COLLEGE BOARD/MAPS TEST INSTRUMENTS

A QUALITATIVE REVIEW

Ray Simpson, Glendale Community College
Madge Valladares, Maricopa Technical Community College
Dave Palla, Mesa Community College
Kay Martens and Margaret Macias, Northeast Valley Education Center
Kathie Driscoll, Phoenix College
Pat Haas, Rio Salado Community College
Jeannie Wyatt and Sylvia Hantla, Scottsdale Community College
Tony Bracamonte, South Mountain Community College

Compiled by: Judith A. Abbott, District Coordinator

April, 1986

EXECUTIVE SUMMARY

Campus project coordinators were asked to survey test administrators on their respective campuses and evaluate ACT's ASSET and College Board's MAPS instruments. Evaluations were to reflect subjective perceptions of the instruments in terms of ease of administration, the tests themselves and test company services. Evaluations were not designed to elicit response to more objective criteria as reliability, validity and actual placement effectiveness.

Project coordinators and test administrators noted pros and cons of both tests. Comments pro and con for both instruments appeared more or less balanced, leading to a conclusion that no critical differences exist in the perception of the instruments themselves. Perceived differences on other criteria, however, support a preference of ACT's ASSET instrument over College Board's MAPS (though one campus stated preference for its own placement tests, followed by ACT as a second choice). In summary:

- ASSET's test directions were perceived more frequently as more clear
- ASSET's timing was preferred due to its relative brevity
- ASSET comes with Scantron and self-scoring answer sheets as opposed to MAPS hand-scorable answer sheets
- ASSET's "Educational Planning Form" was considered superior to College Board's "Student Placement Inventory"
- ACT's research services were preferred for the timeliness of the reports as well as their practical utility
- Dealings with ACT's personnel were considered more satisfactory over the duration of the project

Detailed comments follow for review.

I. SPECIFICATIONS FOR ADMINISTRATION

A. TEST DIRECTIONS

- [ACT] perceptually easy to administer
- Instructions for ASSET are clearer [than MAPS] and less cumbersome.
- Directions for administering [ASSET] test are clear, easy to understand and learn. Direction for test administration [of MAPS] not as clearly defined.
- The instructions for MAPS appear to be clearer than ACT.
- The overall administration of each test was relatively simple. Directions were clear and complete.
- No differences with test administration instructions for either ASSET or MAPS. Instructions for both instruments seem clear and concise. Sample items seem relevant.
- Overall the instructions [for ASSET] are clear. The exception is the language usage test, which should be clearer. The instructions on [MAPS] are very clear. [However] the directions for which math test to select are confusing and often encourage students to test higher than their skill level.

B. TIMING

- The ASSET takes 49 minutes to administer as opposed to 80 minutes for the MAPS. During the time it takes to complete the MAPS assessment, I can provide a half-hour orientation and complete the ASSET assessment.
- From a test administrator's point of view, the ASSET is preferred
- In both the semesters we've given the tests, the ASSET has been favored 5 to 1 over the MAPS. Time factors seem to be the primary reason for this large difference.
- ASSET PRO: Shorter test taking time limits were preferred by the students.
- ASSET PRO: We feel that based upon the demonstrated lack of math skills which students bring to our campus directly from high school they should have to take basic math assessment. The 30 minutes this adds to [ASSET] testing is worth it in terms of student skills identified.
- Students tend to complete more questions on three components of ASSET test than MAPS because it is shorter.
- ASSET CON: Time of administration for two levels of math.

- ASSET CON: Separate test is required for advanced math students, which extends total testing time by another 30 minutes.
- The CB instruments [MAPS] were easier to administer in that there were less timing interruptions...[MAPS] is the easiet to time and proctor.
- MAPS PRO: Extended test taking time limits (students appeared less stressed)

II. SCORING PROCEDURES

- ASSET came with ScanTron scoring capabilities; MAPS had to be hand scored.
- [ASSET] self-scoring; [MAPS] not self-scoring
- All algebra tests for the ASSET had the same answer key, facilitating ease of scoring.
- [For ASSET] the answer sheet is self scoring which is a great timesaver and lessens the possibility of losing scoring sheets or not having enough of them. [For MAPS] the sequence for scorers is inconvenient, with arithmetic skills last, yet on the planning forms it appears as first. A bad feature of this answer sheet is that it is not self scoring. The scoring sheet needs to be aligned exactly, and timewise is not efficient. I would not recommend using this answer sheet.
- ASSET PRO: easy to score.
- Although this problem could be solved in the District adopts the MAPS, the hand scoring of the MAPS test is cumbersome to say the least.
- ASSET PRO: Test can be self-scored.
- The ACT self scoring sheets are very helpful.
- [For ASSET] the scoring was easier.
- MAPS CON: answer sheets scored by hand--need machine scoring capability.
- MAPS CON: Test must be hand-scored which requires additional staff when testing large groups.

III. EASE OF ADMINISTRATION PER TEST COMPONENT

A. ACT'S EDUCATIONAL PLANNING FORM/CB'S STUDENT PLACEMENT INVENTORIES

- [ASSET] Educational Planning form well suited for needs of our district with only minor changes required.

- Educational Planning Form is easy to fill out--questions seem to flow! [whereas] Student Placement Inventory appears to be a little more complicated--students request explanation of certain items; takes longer to fill out.
- [ASSET's] planning form is numbered which makes it easy for test administrators as they explain the form to the students. The students can follow instructions easier. There is a place for the date at the top of the form and at the bottom, which means it is not likely to be overlooked. Section 19 and 20 is useful information in identifying high risk students, in planning and in identifying students that should receive follow-up information.
- In administering the tests I quickly learned that the ASSET data form was superior to the MAPS student data form. The MAPS form required unnecessary responses (i.e., Comparative Interest Scores and Advance Placement...) from the students that tended to further confuse them. There are also two places for recording the student's name and listing college names. The section, Career Planning, is also confusing for the students. Finally, the space allotted for making placement recommendations is entirely too small.
- ASSET Educational Planning Form is acceptable except for item ten. Students are limited in math courses cited since geometry and trigonometry are omitted. Asking students for final course grades does not provide an adequate expressive of overall performance in the course.
- The information retrieved from the [ASSET] EDP form assisted in advising students. This background information provided counselors with insight into past academic experience, student-perceived needs and student aspirations. The EDP helped in structuring interviews since advisors could identify anticipated student needs such as: tutorial, financial, etc. Through these self-identified needs, advisors could direct students toward institutional support services.
- ASSET CON: Student information form needs to be customized. (Computer capability would be great with this info and scores automatically printed out in letter format for use by student and advisor.)
- MAPS Student Inventory Profile needs to be completely modified should that battery be selected.
- [MAPS] Student Placement Inventory not designed well to suit our needs. Much of the information requested not pertinent for our use.
- There is only one place for the date on [the MAPS] form which is on the lower right hand corner. Should have another place for date. This form is not numbered and is therefore not easy to follow. The section for

local use repeats the same information asked for on the upper left of the form/ The middle section asks for comparative interest index scores and does not apply to us. The same is true for the section following which asks for advanced placement/credit plans. The placement socres section is not clear, and the scoring sequence is reversed on the template.

- Both ACT and CB [forms] are time-consuming for students to fill out. Part of the difficulty is their recall of previous grades and courses, decisions regarding selection of major area of study, etc. Based upon the demonstrated Reading score levels via the assessment instruments, we begin to see why students have problems with the forms. Perhaps the forms need to be simplified in content, appearance, and Reading ability level required.
- The student information sheets required a great deal of time to complete. Students were unsure of many questions, indicating major by number required extra directions, many students did not fill-in all blanks. Proctors were directed to check over forms and have students complete them. The carbonless paper did not work very well for so many copies. Their copy was usually unreadable. The spaces for recording scores and placement should be simplified.

B. ENGLISH TEST (i.e., ACT's "LANGUAGE USAGE"; MAPS's "WRITING")

- The Language Skills portion of the ASSET is numbered one to 64 and answers are correct or incorrect which seemed less confusing to students [than the MAPS].
- Faculty have expressed the concern that the [ASSET Language Usage] test is too short to accurately measure a student's language usage skills. Students tesd to do better on this test than on the MAPS. and I feel it is because they guess more on the ASSET than on the other.
- [There is a problem with the ASSET answer sheet in that] the lettering is small and some students, especially adult students who wear glasses, have trouble reading it. In particular, the language usage skills section, with I and C.
- The [MAPS] writing test is longer than the ASSET and it makes the student use more reasoning skills. In part 2, it asks students to choose the correct answer, instead of guessing only if it is correct or incorrect.

- The MAPS writing assessment is in two parts. If a student does not complete part one he/she must begin part two at question number 21, increasing the chance of blackening the wrong answer.
- The writing section [for MAPS] is in 2 parts in the test booklet and is combined on the answer sheet is confusing and resulted in several students skipping on the next section 3.
- MAPS CON: "Writing" section of test is divided into two parts creating confusion to students when marking their answer sheets.
- ...the CB [MAPS]...for the English/Reading determination has about the same attributes as ACT.

C. READING SKILLS TEST

- The reading section of the ASSET is in large bold type, making it easier to read than the MAPS.
- ASSET CON: needs more of an item-analysis format for scoring critical reading (similar to Stanford Diagnostic) for screening into RDG 101.
- ....the CB [MAPS]...for the English/Reading determination has about the same attributes as ACT.

D. MATH TEST (i.e., ACT's "NUMERICAL SKILLS"; MAP's "ARITHMETIC")

- The drawback [for MAPS] was that basic math was an elected option for the student and not a required testing level. ...For the entry student, ACT provides the needed, in our opinion, numerical skills followed by a choice of Algebra levels. CB allows the student to exempt any computation in basics and proceed directly to an Algebra level. We feel that based upon the demonstrated lack of math skills which students bring to our campus directly from high school they should have to take this basic math assessment.
- ASSET PRO: The basic math test screens by skill to advanced test rather than judgement of student or H.S. courses taken
- ASSET CON: Must take two tests to place
- ASSET CON: Separate test is required for advanced math students, which extends total testing time by another 30 minutes; Requires a counselor to be present during testing process to determine which students will require advanced testing in math.

- Unless there is strong rationale for separate assessment of numerical skills, I prefer the MAPS process of student self-selection of the appropriate math section. Math faculty will need to determine if either procedure is more educationally sound.
- MAPS PRO: Separate advanced math testing not required since students pre-select correct test based on their math background
- MAPS PRO: Only one test to place
- The Math Department liked the CB test better. They would like to see computerized, branched tests that would maximize validity and minimize time.
- MAPS CON: Math cut-off scores need revision to reflect student choosing appropriate test (not always accurate)

IV. EARLY USE OF TESTS/TEST RESULTS

- Faculty refer more students to ASSET
- [ASSET preferred because] tests seem easier--scores on ASSET higher than on MAPS
- While there was some initial criticism of both tests as standardized tests, the acceptance of the test results seems to have been established.... I believe some adjustment in the cut-off scores is necessary, but generally [we] are satisfied with the results of the placement based on these tests. Also, the students appear to appreciate having this information. Even if they choose to ignore the recommendations, they seem to appreciate the intent of the assessment. The actual placement outcomes won't be determined until all the follow-up data is returned from the vendors. However, my personal opinion is that the English cut-off scores may need to be raised or a writing sample included with this test to insure more accurate placement into English 101.
- As far as the tests themselves, English and Math in particular reported placement problems. This could be the result of inappropriate cut-off scores.
- The faculty response to the accuracy of ACT and MAPS course placement was mixed. All Math, Reading and English instructors administered their own test in order to verify whether or not students were placed correctly. A small percentage of students were misplaced and there was no defineable difference between MAPS or ACT placement. It is

important to note that [our own] placement test is a better indicator of skill level as compared to ACT or MAPS. [Our test] has been refined in terms of placement scores during the past few years and it also includes a writing sample.

V. TEST COMPANY SERVICES

A. RESEARCH REPORTS

- ACT provides excellent research services. It is unclear what research support would be available on a continuing basis from College Board. Research services are a critical factor since we do not have the necessary resources to continually evaluate and revise our cut-off scores.
- Data provided by ACT was extensive and useful.
- To date, analysis of ASSET data has been informative while MAPS data is limited and often confusing to the reader.
- The data retrieved through ACT appears to be more useful than MAPS. Other important factors such as cost and timeliness of reports need to be examined. The data is currently being analyzed and distributed to the faculty. A definite response to the value of the data is premature at this time.

B. TECHNICAL SUPPORT

- The initial orientation conducted by ACT was a good one - their planning, preparation and materials greatly enhanced our understanding about the instrument. Also, the ACT representatives seemed to be relatively easy to contact.
- The training and support provided by ACT have been readily available and extremely helpful. It has been much more difficult to obtain College Board support.
- Overall, my dealings with ACT have been easier and more satisfactory than my dealings with CB. The availability of a representative and the quicker response times are two factors that favor ACT over CB.

- ASSET PRO: Cooperative nature of ACT and their people in providing assistance in the field as well as general support; willingness to make adjustments and alter original agreements to satisfy our needs.
- The interest and support provided by College Board representative, Chuck Gavin, and ACT representative, Sam Mackie, have been appreciated. They have shown a service-oriented attitude and demonstrated excellent follow-through skills. ... Since Sam's departure, I have felt a more distant working relationship with ACT.
- College Board, through ETS, was helpful in discussing test selection criteria and in providing options for test selection. A similar option was not available from ACT.
- MAPS PRO: Field representative (Chuch Gavin) contact on a regular basis but less accessible geographically.
- MAPS CON: Unwillingness to make changes to accomodate our needs; uncooperative nature of people in general.

GENERAL COMMENTS

- My overwhelming preference is for the ASSET . . .
- Since the advent of the pilot we are administering so many different tests that I eagerly await a decision one way or another. One instrument across the board for general placement and program requirement would be a relief!
- With respect to outcome value for the students, we would lean toward a conclusion that ACT provides the more comprehensive and ordered assessment of student skill levels. This offers advisors good information to begin the planning process with students. Further, we feel that the manner in which the ACT recommends packaging of assessment and orientation is a necessary and productive approach to use with new students. We have certainly found this to be the case.
- From a test administrator's point of view, the ASSET is preferred because it is shorter, faster to score and the planning form is better. However, the language usage section should be lengthened.
- Cost factors don't seem to make much difference at this time. What [we] are primarily interested in is finding a test that fits into [a] variety of locations and programs. The ASSET appears to be the test of choice.
- In short, I prefer to maintain [our own] placement test and to utilize the ACT EPF (Educational Planning Form). My second choice is ACT then a close third is MAPS.

APPENDIX F

STUDENT SURVEY ANALYSIS: TESTING THE DIFFERENCE BETWEEN TWO PROPORTIONS (ASSET VERSUS MAPS)

FALL 1985-86

QUESTION	FALL '85 (N = 218) SIGNIFICANCE LEVEL .10	.05	.01	SUMMARY OF FINDINGS
UNDERSTOOD REASONS FOR TAKING TESTS				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES				NO DIFFERENCES
LIKED TAKING TESTS AT ONE SITTING				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES	•			MORE - ASSET RESPONSES
TEST DIRECTIONS CLEAR				
•POSITIVE RESPONSES	•			MORE + ASSET RESPONSES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES		•		MORE - MAPS RESPONSES
TEST EXAMPLES CLEAR				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES	•			MORE - ASSET RESPONSES
READING TEST: "FAIR" TEST				
•POSITIVE RESPONSES		•		MORE + ASSET RESPONSES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES				NO DIFFERENCES
READING TEST: "GOOD" TEST OF ABILITY				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES			•	MORE - MAPS RESPONSES

Fall Survey--continued

ENGLISH TEST: "FAIR" TEST				
•POSITIVE RESPONSES			•	MORE + ASSET RESPONSES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES			•	MORE - MAPS RESPONSES
ENGLISH TEST: "GOOD" TEST OF ABILITY				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES				NO DIFFERENCES
MATH TEST: "FAIR" TEST				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES		•		MORE ≠ MAPS RESPONSES
•NEGATIVE RESPONSES				NO DIFFERENCES
MATH TEST: "GOOD" TEST OF ABILITY				
•POSITIVE RESPONSES		•		MORE + ASSET RESPONSES
•NEUTRAL RESPONSES		•		MORE ≠ MAPS RESPONSES
•NEGATIVE RESPONSES				NO DIFFERENCES
TEST TIME LIMITS ADEQUATE				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES				NO DIFFERENCES
TESTS/TESTING: CUMULATIVE				
•POSITIVE RESPONSES			•	MORE + ASSET RESPONSES
•NEUTRAL RESPONSES		•		MORE ≠ MAPS RESPONSES
•NEGATIVE RESPONSES		•		MORE - MAPS RESPONSES

SPRING 1985-86

QUESTION	SPRING '86 (N = 104) SIGNIFICANCE LEVEL .10	.05	.01	SUMMARY OF FINDINGS
UNDERSTOOD REASONS FOR TAKING TESTS				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES				NO DIFFERENCES
LIKED TAKING TESTS AT ONE SITTING				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES				NO DIFFERENCES

Spring Survey--continued

TEST DIRECTIONS CLEAR		
•POSITIVE RESPONSES	•	MORE + MAPS RESPONSES
•NEUTRAL RESPONSES		NO DIFFERENCES
•NEGATIVE RESPONSES		NO DIFFERENCES
TEST EXAMPLES CLEAR		
•POSITIVE RESPONSES		NO DIFFERENCES
•NEUTRAL RESPONSES		NO DIFFERENCES
•NEGATIVE RESPONSES		NO DIFFERENCES
READING TEST: "FAIR" TEST		
•POSITIVE RESPONSES		NO DIFFERENCES
•NEUTRAL RESPONSES		NO DIFFERENCES
•NEGATIVE RESPONSES		NO DIFFERENCES
READING TEST: "GOOD" TEST OF ABILITY		
•POSITIVE RESPONSES		NO DIFFERENCES
•NEUTRAL RESPONSES		NO DIFFERENCES
•NEGATIVE RESPONSES	•	MORE - ASSET RESPONSES
ENGLISH TEST: "FAIR" TEST		
•POSITIVE RESPONSES	•	MORE + MAPS RESPONSES
•NEUTRAL RESPONSES	•	MORE ≠ ASSET RESPONSES
•NEGATIVE RESPONSES		NO DIFFERENCES
ENGLISH TEST: "GOOD" TEST OF ABILITY		
•POSITIVE RESPONSES		NO DIFFERENCES
•NEUTRAL RESPONSES	•	MORE ≠ ASSET RESPONSES
•NEGATIVE RESPONSES		NO DIFFERENCES
MATH TEST: "FAIR" TEST		
•POSITIVE RESPONSES		NO DIFFERENCES
•NEUTRAL RESPONSES		NO DIFFERENCES
•NEGATIVE RESPONSES		NO DIFFERENCES
MATH TEST: "GOOD" TEST OF ABILITY		
•POSITIVE RESPONSES		NO DIFFERENCES
•NEUTRAL RESPONSES		NO DIFFERENCES
•NEGATIVE RESPONSES		NO DIFFERENCES
TEST TIME LIMITS ADEQUATE		
•POSITIVE RESPONSES		NO DIFFERENCES
•NEUTRAL RESPONSES	•	MORE ≠ ASSET RESPONSES
•NEGATIVE RESPONSES		NO DIFFERENCES
TEST TESTING: CUMULATIVE		
•POSITIVE RESPONSES		NO DIFFERENCES
•NEUTRAL RESPONSES		NO DIFFERENCES
•NEGATIVE RESPONSES		NO DIFFERENCES

1985-86 TOTAL

QUESTION	1985-86 (N = 322) SIGNIFICANCE LEVEL .10	.05	.01	SUMMARY OF FINDINGS
UNDERSTOOD REASONS FOR TAKING TESTS				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES				NO DIFFERENCES
LIKED TAKING TESTS AT ONE SITTING				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES	•			MORE # MAPS RESPONSES
•NEGATIVE RESPONSES		•		MORE - ASSET RESPONSES
TEST DIRECTIONS CLEAR				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES				NO DIFFERENCES
TEST EXAMPLES CLEAR				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES				NO DIFFERENCES
READING TEST: "FAIR" TEST				
•POSITIVE RESPONSES	•			MORE + ASSET RESPONSES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES	•			MORE - MAPS RESPONSES
READING TEST: "GOOD" TEST OF ABILITY				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES		•		MORE - MAPS RESPONSES
ENGLISH TEST: "FAIR" TEST				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES				NO DIFFERENCES
ENGLISH TEST: "GOOD" TEST OF ABILITY				
•POSITIVE RESPONSES				NO DIFFERENCES
•NEUTRAL RESPONSES				NO DIFFERENCES
•NEGATIVE RESPONSES				NO DIFFERENCES
MATH TEST: "FAIR" TEST				
•POSITIVE RESPONSES	•			MORE + ASSET RESPONSES
•NEUTRAL RESPONSES	•			MORE # MAPS RESPONSES
•NEGATIVE RESPONSES				NO DIFFERENCES

1985-86 Survey--continued

MATH TEST: "GOOD" TEST OF ABILITY	
•POSITIVE RESPONSES	MORE + ASSET RESPONSES
•NEUTRAL RESPONSES	MORE # MAPS RESPONSES
•NEGATIVE RESPONSES	NO DIFFERENCES
TEST TIME LIMITS ADEQUATE	
•POSITIVE RESPONSES	NO DIFFERENCES
•NEUTRAL RESPONSES	NO DIFFERENCES
•NEGATIVE RESPONSES	NO DIFFERENCES
TESTS/TESTING: CUMULATIVE	
•POSITIVE RESPONSES	MORE + ASSET RESPONSES
•NEUTRAL RESPONSES	NO DIFFERENCES
•NEGATIVE RESPONSES	NO DIFFERENCES

NOTES ON THE ANALYSIS

For this study, possible differences between ACT/ASSET and College Board/MAPS participants' perceptions were targeted for analysis in order to determine whether or not one assessment experience was more positively perceived than the other. To explore possible differences, each question on the survey was tabulated by those reporting positive, neutral and negative feelings. Students who did not respond to a question were eliminated from consideration and individual sample sizes x question adjusted accordingly.

Survey results were analyzed per question by comparing the proportion of responses by response category (e.g., positive) for ASSET and MAPS participants. For each of these comparisons, or "tests of the difference between two proportions," the null hypothesis was that no differences existed between the proportion of positive, neutral or negative responses between test participants on each of the two instruments. That is:
H_0: $p_1 = p_2$.
Alternative hypotheses were that differences did exist such that p_1 was either greater than or less than p_2. (H_1: $p_1 > p_2$; H_2: $p_1 < p_2$)

The Z statistic was used to calculate results and defined using critical points of the standard normal curve. Each set of proportions was evaluated at the 90%, 95% and 99% levels of significance (i.e., $\partial = .10, .05$ and $.01$, respectively). For one-tailed tests of significance, the critical regions of acceptance for the null hypothesis were set at:

$(+/-) = 1.25$ for $\partial = .10$;
$(+/-) = 1.6$ for $\partial = .05$; and,
$(+/-) = 2.3$ for $\partial = .01$.

The formulas used to calculate each difference were:

$\hat{p}_1 = x_1 \div n_1$;
$\hat{p}_2 = x_2 \div n_2$;
$\hat{p} = (x_1 + x_2) \div (n_1 + n_2)$;
$\hat{q} = 1 - \hat{p}$; and,
$z = \hat{p}_1 - \hat{p}_2 \div \sqrt{\hat{p}\hat{q}[(1/n_1) + (1/n_2)]}$; where:

$\hat{p}_1$ = the proportion of ASSET respondents;
x_1 = the number of ASSET students (by response category) responding to the question;
n_1 = the total number of ASSET students responding the the question.

$\hat{p}_2$ = the proportion of MAPS respondents;
x_2 = the number of MAPS students (by response category) responding to the question;
n_2 = the total number of MAPS students responding the the question.

$\hat{p}$ = the average proportion of responses (by response category) to the question.

APPENDIX G

COMPUTER PROGRAMMER EVALUATION OF ACT AND COLLEGE BOARD

MCCCD

INTEROFFICE MEMORANDUM

Date: 16-Apr-1986 02:05p GMT
From: Betty Greenwood
GREENWOOD AT A1 AT SIS
Dept: MSCS
Tel No:

TO: ABBOTT AT A1 AT DIST

CC: James E De Vere (DEVERE AT A1 AT SIS)

Subject: Comments re: ACT and College Board/Stu. Assess. Pilot Proj.

Comments concerning performance of the ACT and College Board services in the initial execution of the Student Assessment Pilot Project.

The following were my experiences, in the data processing process, working with ACT Research Services in Iowa City, Iowa, and The College Board MAPS Division in Princeton, New Jersey.

ACT Research Service....

* was well organized, prompt and efficient and had ready answers to the questions posed by MCCD.
* was easily adaptable to change, reacting quickly to our request to use a much larger group of control courses than their software was currently designed to handle.
* user instructions were brief and easily understood.
* provided MCCD a single computer tape containing all college codes, applicable student ID's and associated ACT test scores, making it simple to add the student course grades and GPA to the existing records which resulted in a swift return of the completed computer tape for their analysis.

The College Board MAPS Division....

* seemed not too well organized or efficient, and getting fast response to questions or solutions to requests for data analysis that wasn't currently programmed for was difficult and involved many delays.
* provided no initial computer tape of student information. Following several phone calls it was determined that the data entry best be done at MCCD to avoid further delay of the project. The College Board Student Placement Inventory Sheets, containing the information needed to build the computer tape, were generated at the time the College Board tests were administered at the MCCD colleges. Those sheets were forwarded to the College Board, but the data was never input for computer use.
* seemed to have difficulty modifying their system to process MCCD's larger group of control courses. After some delay, it was decided that MCCD submit six computer tapes for analysis, each the size of the single tape sent to ACT Research Services. Each tape had to be accompanied by voluminous paperwork.
* instructions for completing the paperwork were complex and information for handling the paperwork for the additional courses and analysis specifications of same was not provided.
* generally seemed to have confusion throughout the entire process.

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APPENDIX H

ASSET V. MAPS RECOMMENDATIONS

	M	C	C	C	D	

INTEROFFICE MEMORANDUM

Date: 23-Apr-1986 05:02p GMT
From: Joyce Elsner
JELSNER AT A1 AT RIO
Dept: RSCC Administration
Tel No: 256-7722, ext. 320

TO: ABBOTT AT A1 AT DIST

CC: STATEN AT A1 AT GC
CC: STAHL AT A1 AT SIS
CC: MALCOLM AT A1 AT MC
CC: Joyce Elsner (JELSNER AT A1 AT RIO)
CC: HUDDLESTON AT A1 AT SIS
CC: BRIDEN AT A1 AT PC
CC: BENSYL AT A1 AT SC

Subject: Votes....

At the DI meeting on Monday, the vote was unanimous for ASSET.

May 10, 1986

TO: Judy Abbott

FROM: Julie Bertch, English Instructional Council

SUBJECT: Choice of Assessment Instrument

At the latest meeting of the council (4/28/86), we discussed our perceptions of the assessment tests used in the testing program. Without exception, the council members stated that the preferred instrument in their colleges is the ASSET.

We feel that the data supplied by this test will meet our needs more satisfactorily than either of the other instruments involved in the pilot.

Please let us know what further responsibilities we have for this project and when our input is needed. We believe assessment and placement are important issues for our departments, and we are available for consultation at any time.

SOUTH MOUNTAIN COMMUNITY COLLEGE

MEMORANDUM

TO: Dr. Alfredo G. de los Santos, Jr.

FROM: Ms. Anna Solley, Chair
Reading Instructional Council

DATE: May 9, 1986

RE: Recommendation for ASSET

The members of the Reading Instructional Council unanimously recommended that MCCCD use ASSET district-wide as an assessment instrument in reading.

If you desire further information, please do not hesitate to contact me. Gracias!

cc: Ms. Judy Abbott

ERIC Clearinghouse for Junior Colleges
JUL 3 1986